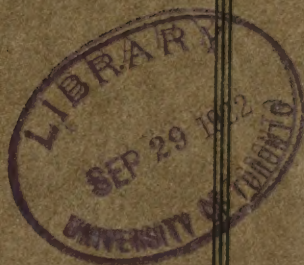


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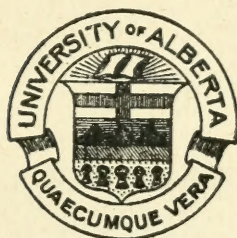


SESSION 1921-22



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THE
UNIVERSITY OF ALBERTA
CALENDAR 1921-22



EDMONTON

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Academic Calendar

1921

June

- 20—High School and University Matriculation Examinations begin.

August

- 13—Last day for receiving applications for examinations on behalf of affiliated societies.
- 13—Last day for receiving applications for September Matriculation at the office of the Chairman of the High School and University Matriculation Examinations Board, Parliament Buildings.
- 27—Last day for receiving applications for supplemental examinations.

September

- 12—Autumn Matriculation Examinations; Examinations of the affiliated societies.
- 26—All supplemental examinations.
- 26, 27—Registration of Freshmen and new students.
- 28—Registration of all other students.
- 29—Lectures in first year courses begin.
- 30—Lectures in all other courses begin.

November

- 1—Last day for graduate and B.D. students to adjust courses or submit subject of investigation.

December

- 23—Christmas vacation begins.

UNIVERSITY OF ALBERTA

1922

January

- 2—Lectures begin.
- 23—Examinations of The Alberta Land Surveyors' Association and The Association of Professional Engineers of Alberta.

March

- 1—Ash Wednesday.

April

- 1—Last day for receiving applications for May Matriculation Examinations at the office of the Examinations Board, Parliament Buildings.
- 1—Last day for graduate students to hand in report of results of investigations or thesis.
- 1—Lectures close in first two years of Applied Science and Agriculture.
- 5—Examinations in first two years of Agriculture and Applied Science begin.
- 13—Survey School begins.
- 14—Good Friday.
- 15—Lectures close in Arts, Law, Medicine, and Pharmacy and the senior years of Agriculture and Applied Science.
- 19—Final Examinations in all Faculties.
- 19—Examinations of the College of Physicians and Surgeons of Alberta, the Law Society, the Institute of Chartered Accountants, the Dental Association, Land Surveyors' Association, Architects' Association, Alberta Association of Registered Nurses, the Veterinary Association of Alberta, and the Alberta Optometric Association.

May

- 9—Charter Day.
- 12—Convocation for the conferring of degrees.

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- ALEXANDER RUSSEL MUNROE, M.D., C.M. (McGill), F.A.C.S., Instructor in Surgery.
- HAROLD ORR, O.B.E., M.B., D.P.H. (Toronto), Instructor in Bacteriology.
- WILFRED ALFRED WILSON, M.D., C.M. (McGill), Instructor in Surgery.
- JAMES FENWICK ADAMSON, M.D. (Toronto), Demonstrator in Anatomy.
- JOHN FRANCIS FOLLINSBEE, M.R.C.S., L.R.C.P. (London), Demonstrator in Anatomy.
- CONRAD G. GEGGIE, M.D., C.M. (McGill), Demonstrator in Anatomy.
- MORTON ELDRED HALL, B.A., M.B. (Toronto), Demonstrator in Pathology.
- HOWARD HAVELOCK HEPBURN, M.D., C.M. (McGill), F.R.C.S. (Edinburgh), F.A.C.S., Demonstrator in Histology.
- CHARLES WATSON HURLBURT, M.B. (Toronto), Demonstrator in Anatomy.
- ALFRED WILLIAM MACBETH, M.D. (Queen's), F.R.C.S. (Edinburgh), Demonstrator in Anatomy.
- FULLER SUTHERLAND MAC PHERSON, M.D. (Western), Demonstrator in Anatomy.
- JOHN ALBERT MAC PHERSON, M.B. (Toronto), Demonstrator in Anatomy.
- FRANK HASTINGS HAMILTON MEWBURN, B.Sc., M.D., C.M. (McGill), Demonstrator in Clinical Laboratory.
- DIXIE PELLUET, B.Sc. (Alberta), M.Sc. (Toronto), Demonstrator in Zoology.

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WALTER HEPBURN SCOTT, M.D., C.M., (McGill), Demonstrator
in Clinical Laboratory.

OSCAR FREDERICK STRONG, D.D.S. (Western Ohio Reserve),
Demonstrator in Anatomy.

RODERICK THOMAS WASHBURN, M.D. (Western), Demonstrator
in Anatomy.

....., Director of Physical Education.

....., Assistant Director of Physical Education.

FACULTY OF AGRICULTURE

HENRY MARSHALL TORY, M.A., D.Sc., LL.D., F.R.S.C., President
of the University.

ERNEST ALBERT HOWES, B.S.A. (Toronto), Dean of the Faculty.

EDMUND KEMPER BROADUS, M.A. (Chicago), Ph.D. (Harvard),
Professor of English.

ADOLF LUDWIG FERDINAND LEHMANN, B.S.A. (Toronto),
Ph.D. (Leipzig), Professor of Chemistry.

ERNEST WILSON SHELDON, M.A. (McGill), Ph.D. (Yale), Profes-
sor of Mathematics.

FRANCIS JOHN LEWIS, D.Sc. (Liverpool), F.R.S.E. & C., F.L.S.,
Professor of Biology.

ROBERT WILLIAM BOYLE, M.A., Ph.D. (McGill), Professor of
Physics.

JOHN ANDREW ALLAN, M.Sc. (McGill), Ph.D. (Mass. Inst. Tech.),
Professor of Geology.

ALLAN COATS RANKIN, M.D., C.M., D.P.H., Professor of Bac-
teriology.

DUNCAN ALEXANDER MAC GIBBON, M.A. (McMaster), Ph.D.
(Chicago), Professor of Economics.

AUSTIN ALLYN DOWELL, B.S.A. (Ames), Professor of Animal
Husbandry.

GARNET HOMER CUTLER, B.S.A. (Toronto), Professor of Field
Husbandry.

FRANK ARCHIBALD WYATT, B.S.A. (Utah), M.S., Ph.D. (Ill-
inois), Professor of Soils.

JOHN MAC GREGOR SMITH, B.S.A. (Manitoba), Professor of
Agricultural Engineering.

CHRISTIAN PETER MARKER, Professor of Dairying.

JOHN ERNEST LATTIMER, B.S.A. (Toronto), Assistant Professor
of Animal Husbandry.

ROBERT NEWTON, B.S.A. (McGill), Assistant Professor of Field
Husbandry.

OFFICERS OF INSTRUCTION

STANLEY SMITH, B.A., B.Sc. (Oxon), Associate Professor of Physics.

JAMES R. FRYER, M.A. (Toronto), Assistant Professor of Field Husbandry.

GEORGE HARCOURT, B.S.A. (Toronto), Lecturer in Horticulture and Assistant to the Dean.

SIMON ALVAH BERGEY, B.S.A. (Toronto), Assistant Professor of Poultry.

MABEL PATRICK, B.A. (Toronto), Lecturer in Household Economics.

CECIL ETHELBERT RACE, B.A. (Toronto), C.A. (Man.), Registrar.

The above constitute the Faculty Council.

PERCY RUSSELL TALBOT, V.S. (Toronto), M.D.V. (Chicago), Special Lecturer in Veterinary Science.

EDITH FRANCES DEADMAN, B.A. (Toronto), Instructor in Household Economics.

....., Director of Physical Education.

INDUSTRIAL RESEARCH DEPARTMENT

Research Council

THE HONOURABLE JEAN LEON COTE, Provincial Secretary, Chairman.

HENRY MARSHALL TORY, President of the University.

JOHN ANDREW ALLAN, Secretary and Geologist.

NORMAN CHARLES PITCHER, Mining Engineer.

JOHN THOMAS STIRLING, Chief Inspector of Mines.

Research Professors

EDGAR STANSFIELD, M.Sc. (Manchester), Fuels.

KARL ADOLPH CLARK, M.A. (McMaster), Ph.D. (Illinois), Road Materials.

FACULTY OF LAW

HENRY MARSHALL TORY, M.A., D.Sc., LL.D., F.R.S.C., President of the University.

Lecturers for the Session 1921-22, Edmonton

A. U. G. BURY, M.A.

E. T. BISHOP, B.A., LL.B.

W. D. CRAIG, B.A., LL.B.

FRANK FORD, M.A., D.C.L.,

K.C.

A. F. MC GOUN, B.A., B.C.L.,
M.A.

A. E. POPPLE, LL.B.

G. F. STEER, M.A.

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Lecturers for the Session 1921-22, Calgary

W. KENT POWER, B.A., LL.B.	L. F. MAYHOOD, B.A., LL.B.
W. G. EGBERT, B.A., LL.B.	L. W. BROCKINGTON, B.A.
A. M. SINCLAIR, Esq.	M. PORTER, Esq.
J. B. BARRON, LL.B.	W. H. SELLAR, M.A., LL.B.
A. HANNAH, Esq.	S. E. BOLTON, B.A.
J. T. SHAW, Esq.	

SCHOOL OF PHARMACY

H. H. GAETZ, Director.	
President TORY.	Professor ALEXANDER.
Professor LEHMANN.	Professor SHELDON.
Professor LEWIS.	Professor BOYLE.
Professor RANKIN.	Associate Professor COLLIP.
F. A. S. DUNN.	C. E. RACE, Registrar.

CORRESPONDENCE DEPARTMENT

DUNCAN STEWART MAC KENZIE, Director.
JANET MAC GREGOR MC BRATNEY, Instructor in Languages.
ANNIE NORRINGTON, B.Sc. (Manitoba), Instructor in Science
and History.
MRS. E. T. MITCHELL, M.Sc. (Alberta), Instructor in Mathematics.

Organization of the University

History and Government

The University of Alberta was created by an act of the Legislature of the Province passed at the first session after provincial autonomy had been granted (1906); that is, the act created the machinery by which the University could be brought into existence. By this act the University, which then consisted of the Chancellor, the Vice-Chancellor, the Senate, and the Convocation, was empowered to undertake the organization and development of the teaching faculties, to affiliate colleges, and, generally, to undertake all work relating to an institution of higher learning. An amendment to the act, passed during the session of the Legislature in 1907, authorized the Lieutenant-Governor-in-Council as a preliminary step to the organization of the University, to appoint the first President, to whom was to be given the responsibility, in conjunction with the Senate, of organizing and developing the university scheme. Acting upon this authority the Government selected the first President, who entered upon his duties on January 1st, 1908.

Under the act, all resident graduates of British and Canadian universities were entitled to become members of the convocation of the University of Alberta, by registering before a fixed date. Three hundred and sixty-four graduates, representing all the Canadian and many of the British Universities, registered, so that a large and representative body constituted the first convocation.

The act has also provided that the Senate should consist of fifteen members, ten to be appointed by the Government, five to be selected by the members of convocation from among themselves. The Chancellor likewise was to be chosen by a ballot of Convocation. The voting for the first Senate election closed on March 18th, 1908, and immediately thereafter the Government nominated its ten representatives, Mr. Justice Stuart of Calgary was chosen as first Chancellor.

As the Act made the Senate the governing body of the University, both in relation to education and business management, at the first meeting of that body, on March 30th,

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1908, it took all the necessary steps to organize the first faculty, to be known as the Faculty of Arts and Sciences, and to open the University of Alberta for classes in this Faculty in September, 1908.

At the second meeting of the Senate, held in Calgary, July 6th, 1908, the first faculty appointments were made, four professors were named to co-operate with the President in the work of commencing instruction.

The first session of the University opened on September 23rd, 1908. The total registration for the session was forty-five, four of whom were students taking graduate courses in the Department of Physics.

At the second session of the Second Legislature, November, 1910, a comprehensive measure reorganizing in large part the government of the University was introduced and passed into law. By the new act a Board of Governors was constituted, to consist of the Chancellor and the President of the University, ex-officio, together with nine members to be appointed by the Lieutenant-Governor-in-Council; the functions of this Board may be defined generally as those of business management and administration, including the making of appointments to the teaching and office staff of the University, the handling of all University moneys and investments, and the supervision of buildings and grounds. The Senate, by this same act, was continued as a body entrusted with the general supervision of the University's educational work. It is defined by the statute to consist of the Chairman of the Board of Governors, the President, the heads of affiliated Colleges, the Deans of the University Faculties, all ex-Chancellors or ex-Vice-Chancellors of the University, the Senior Principal of the Provincial Normal Schools, and the Superintendent of Education for the Province ex-officio; of faculty representatives; of representatives of all societies whose examinations for status are conducted by the University; and of ten members elected by Convocation. The prerogatives of the Senate include the field of student regulation and discipline, the approval of all educational schedules or programmes, and the establishing and conferring of degrees. The Convocation, under this act, is composed of all graduates of the University and of all the resident graduates of British and Canadian universities who registered under the University Act of 1906. Convocation is empowered to consider all questions affecting the well-being of the University and to make representation thereupon, to the Board and to the Senate.

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Conformably with the provisions of this act, late in December, 1910, the Lieutenant-Governor-in-Council appointed nine members of the Board of Governors, who met early in January, 1911, and organized by electing E. C. Pardee, Esq., of Edmonton, Chairman. An election for members of the Senate, in accordance with the terms of the act, was ordered. By March 8th the elective members of the Senate had been chosen, and the new Senate held its first meeting for the transaction of business on March 31st, 1911, completing, among other items, arrangements for the first graduation exercises of the university. These took place on May 16th, 1911.

During the summer of 1911, Athabasca Hall, the first building of the University scheme to be completed, was made ready for occupation, and lectures were given for the first time on the University Grounds in September of that year. At the same time excavations were begun for a second hall of a similar nature. This became available for partial occupation in October, 1912, and in its entirety by the beginning of 1913, under the name of Assiniboia Hall. In the autumn of 1913 the foundations of the third building, Pembina Hall, were laid, and in October, 1914, a considerable part of it was ready for use as class-rooms. It is now used for residential purposes only.

From its very beginning the University of Alberta has undertaken extension work in the form of lectures by members of its staff in a number of important provincial centres, but special emphasis was laid upon this side of the University's activities by the appointment in May, 1912, of a special Secretary of the Department of Extension. This officer undertook the task of systematizing the extension work in such a way as to enable the University to achieve more fully the important function of reaching in its educational work the people of the province at large.

The Department of Extension also inaugurated in 1913 a press bulletin, a system of travelling libraries, and a bureau of information from which literary clubs and debating societies can obtain briefs on issues of all sorts. It organized in the same year a high school debating league which has stimulated very remarkably the interests of the secondary schools of the Province in argumentation and public speaking. A new departure in 1915 was the presentation to Edmonton and Calgary audiences of a series of discussions on the social problems of western Canadian life.

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The year 1912 saw another development of the University's activity in the creation of a Faculty of Law; this was effected by a resolution of the Senate under date of October 3rd, upon which the Board of Governors took favorable action shortly afterwards. A three-year course leading to the degree of LL.B. was established, and thirty-five students were enrolled for the first session of the new faculty. In 1914 this course, portions of which coincide with the requirements of the Alberta Law Society, was extended to cover four years.

In the autumn of 1913 the Department of Civil Engineering and its allied subjects ceased to form a portion of the original Faculty of Arts and Sciences, and were constituted a new faculty under the name of the Faculty of Applied Science. At the same time the fourth University faculty came into existence, and instruction began in the Faculty of Medicine. Twenty-six students constituted the first class in this faculty, and arrangements have been perfected to carry them through at least three years of a five year course, with the privilege of being then transferred, if necessary, with full standing to certain Eastern universities. Under the Faculty of Medicine a Department of Pharmacy has been organized; instruction in this Department began in October, 1914, designed to prepare students to satisfy the requirements of the Pharmaceutical Association of Alberta. Features of interest in connection with the Faculty of Medicine are the University Medical Service whereby the health of all students is supervised in a very direct manner, and the outdoor clinics given at the city hospitals by members of the faculty.

In December 1913 the contracts were let for the construction of what is known as the main teaching building of the University. This fine structure in the neo-classic style ranks high among the university buildings of Canada for the combination it presents of utility and beauty. It was occupied in October 1915, being opened with comparatively simple ceremonies because of the shadow of war which then began to rest so heavily upon the country.

Of the work of the University in the war, record will be made elsewhere; it is fitting, however, to note here that the University of Alberta sent into various branches of His Majesty's service in all parts of the world 438 undergraduates, alumni, and staff-members. Of these a large number received special military decorations from the British Empire and sev-

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eral also from the French Republic, while to more than sixty it was given to offer for their country the last measure of sacrifice.

During the long period of the Great War, all building activities were suspended, but in May 1919, arrangements were made to proceed with an extension of the then existing civil engineering unit and to duplicate this building by a similar structure at the north end of the main teaching building.

In September 1915 the fifth university faculty came into existence when the Faculty of Agriculture was created. The southern end of the University property is largely devoted to the farm buildings and experimental plots of this College, and it became necessary in the spring of 1919 to acquire still more land a short distance south of the university site proper in order to provide further facilities for the study of animal husbandry.

Pharmacy, which as above noted, began its work as a Department of the Faculty of Medicine in October, 1914, was in the spring of 1917 erected into a School of Pharmacy, designed not only to give instruction in such work as is required by the Pharmaceutical Association of Alberta, but also to carry forward to a degree such students as may determine to devote four years of study to the work. In this manner the whole standard of Pharmacy in the Province of Alberta is distinctly elevated.

Dentistry was authorized as a sub-faculty under the Faculty of Medicine in 1917, and the first students under this arrangement offered themselves in the session of 1918-19. It is proposed for the present that they shall complete their work in eastern schools under equitable arrangements such as have been made for students in the Faculty of Medicine.

In 1918 the Department of Household Economics was organized under the Faculty of Arts and Sciences, the need having already been made clear by a demand for this work the previous session. In the fall of 1918 also special recognition was accorded the physical needs of the rapidly growing body of women students by the appointment of a Directress of Physical Education for Women.

In the fall of 1918 the College of Agriculture lent itself most heartily to the pressing demands of reconstructional education by offering courses of a special nature in various agricultural lines and also in carpentering and blacksmithing.

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A large number of returned soldiers were in this way most satisfactorily accommodated, and it is expected that this work will be continued during several years to come.

The insistent demands of the economic and social problems of the province were recognized by the creation in the spring of 1919 of chairs of Soils, Mining Engineering, and Economics, in all of which a full measure of work was given in the fall of 1919. All of these subjects had previously been handled as branches of already existing departments but with the recognition of their growing importance came the decision to treat them as independent units of the educational scheme.

The extraordinary increase in the number of students in the Faculty of Medicine, made it absolutely imperative in the fall of 1919 to consider the question of the future housing of that Faculty, and the Board of Governors authorized early in 1920 the construction of a Medical Building, work on which began in April of that year. The new edifice faces south on the quadrangle of university buildings, and is in architectural harmony with the general neo-classic style adopted some years previously for the whole university scheme. In addition to accommodating the Department of Chemistry, it contains laboratories for the Department of Anatomy, Physiology, Bio-Chemistry, Pathology, and Public Health, and also two lecture halls in the theatre form with a capacity of two hundred students each. Full advantage has been taken in the erection of this building of the wide experience afforded by the last twenty years in such matters.

The status of the School of Pharmacy was augmented during the academic year 1919-20 by the creation of the office of Director of the School; this step completed the evolution of the School from a Department under the Faculty of Medicine to an independent unit in the university plan.

During the session 1919-20, the entire university curriculum in all faculties was subjected to careful scrutiny and revision in the light of the most recent developments in the theory of university education and of the growth of the demand in the province for university training, and the results of this investigation, constituting the most important advance in the scholastic history of the institution, became available by authorization of the Senate for the academic year beginning in September, 1920. The general aim of the revision was to

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secure greater freedom in the election of courses without abandoning in any sense the basic features of a sound education as dictated by long experience.

A notable feature of the university life during the winter of 1919-20 was the formation of the Scientific Association of the University of Alberta, comprising all the members of the staff engaged in teaching and research work in the pure and applied sciences. The meetings of this society revealed in a convincing way the present lack of knowledge existing in regard to the facts upon which the economic life of the Province of Alberta must ultimately depend, and at least forty problems of pressing importance were definitely formulated and submitted to the government of the province for consideration. With the entire concurrence of the latter the university assumed through its various departments the important duty of economic research into the resources of the province under the general chairmanship of the Honourable J. L. Côté, Provincial Secretary, and during the field season of 1920 operations began on a definite and considered basis. In this connection the university farm, primarily equipped for the purposes of the Department of Agriculture was authorized by the Board of Governors to conduct an experimental station for agricultural research.

The deanships of the University, first instituted in May 1914 by the appointment of Professor Kerr as Dean of the Faculty of Arts, and added to by the appointment of Dean Howes in the Faculty of Agriculture in 1915, were further increased in the spring of 1920 by the nomination of Dr. Rankin to the deanship of the Faculty of Medicine.

The Medical Building, begun in the spring of 1920, was brought to completion in the summer of 1921, thus becoming available for teaching purposes in September. The equipment of this building in all departments is particularly adequate for scientific instruction in Medicine and for the needs of medical research, and during the year 1920-1921 the Departments of Physics and Chemistry, the work of which bears an important relation to that in the Faculty of Medicine, received also generous additions to their material resources.

Negotiations of vital interest to the future of medical teaching in the University were begun during the summer of 1920 with the Rockefeller Foundation, instituted by John D. Rockefeller, for the promotion of better medical training in the United States and Canada; the sum of one hundred millions of dollars has been placed under the administration of this

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Foundation, of which five millions is for use in the Dominion of Canada. While these negotiations are still incomplete, the sum of twenty-five thousand dollars annually, representing the interest on half a million, has been made available for the use of the Medical Faculty in the University of Alberta.

In the Faculty of Agriculture during the year 1920-21, a new department of Agricultural Engineering was added. In this department, as in all the other departments of the Faculty of Agriculture, much progress was made in providing the equipment required for practical instruction in agricultural subjects and for the furtherance of scientific investigation in agriculture generally.

The relation of the University to public service was further emphasized during 1920-21 by the inclusion in the University's lecture and examination programme of the courses relating to the training of nurses for the Public Health service of the Province. Legislative enactment also placed optometry and veterinary science under the control of the University Senate for purposes of examination for license to practise within the Province. An amendment was also made by the Legislature at its 1921 session to the Legal Profession Act whereby the establishment of a School of Law in connection with the University is made possible.

The Library

The library comprises a reference room, a reading room where journals are kept, and a stack room.

There are now altogether over 19,000 volumes in the library, besides a large number of pamphlets, bluebooks and periodicals.

A feature of the library is a large collection of books, written by Canadians and about Canada, which was presented to the University by the Honourable A. C. Rutherford.

Matriculation

Classification of Students

The courses of study in the University are open to men and women on equal footing.

Except under special circumstances no student under sixteen years of age will be admitted to the first year, or under seventeen to the second year.

No one shall be registered as a student for a full undergraduate course who has failed in more than two of the subjects enumerated in the Matriculation Examination Requirements for the various faculties.

Students are classified as Graduate, Undergraduate, Conditioned, Partial and Special.

Graduate students are those who hold the Bachelor's degree (B.A. or B.Sc.) and are either pursuing special studies in advanced courses, or have been formally admitted upon the recommendation of the Committee on Graduate Studies, to candidacy for the Master's degree.

Undergraduates are matriculated students who are taking a full undergraduate course leading to a degree. In order to become undergraduates, candidates must have passed the full matriculation examination of the University or some other equivalent examination.

Conditioned students are those who having failed in not more than two subjects of their matriculation examination are actually taking a full undergraduate course leading to a degree, and are entitled to obtain undergraduate standing on completing their matriculation.

For students who are deficient in the language subjects and are admitted as conditioned students, special preparatory classes are provided. Students are advised, however, that the additional work required in carrying these preparatory classes constitutes a handicap which should be avoided if possible.

Partial Students. Students who are proceeding to a degree but who are not registered for a full undergraduate course, or who during the session drop two courses, are partial students.

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Special students are those who, not belonging to one of the above classes of students, are pursuing the study of particular subjects. Such students may, subject to the approval of the Committee on Admissions, attend classes without previous examination, but any classes so taken can not be credited towards a degree.

Matriculation Examinations

Examinations for entrance to the University are conducted three times each year, in April, June and September, under the control of the High School and University Matriculation Examinations Board. The subjects of examination follow. Applications for these examinations should be made about two months before the date of examination to the secretary of the High School and University Matriculation Examinations Board, Department of Education, Government Buildings, Edmonton.

Matriculation Scholarships

In 1922 there are offered eight scholarships of \$25 each, given by the Senate and the Board of Governors of the University.

Six of these scholarships will be awarded on the results of the June examinations set by the High School and University Matriculation Examinations Board. The other two scholarships will be awarded on the results of the April examinations held for the affiliated colleges. One of these scholarships is available for those candidates taking the examination in Edmonton, the other for those in Calgary. Only those candidates who write on the whole of the matriculation examination and pass in each subject thereof will be eligible for these scholarships.

The Women's University Club Scholarship of \$25.00 is open to women students only on the results of the June Grade XI (Matriculation) examinations for highest standing in English, History, Latin, and French, provided the student passes her other examinations and obtains an average mark of not less than 75 per cent. in the four subjects named. The scholarship is payable after the student is in actual attendance at the University.

EQUIVALENT EXAMINATIONS

The Returned Soldier Scholarship offered by a returned soldier of Calgary, of the value of \$150 a year for three years. Awarded for the highest standing in the Province on the Grade XII examinations of 1920. Winner: John McIntyre Cassels.

The P. Burns Scholarship offered by Mr. P. Burns of Calgary, of the value of \$150 annually. Awarded for the highest standing obtained by a student in Calgary on the Grade XII examinations, and payable after the student is in actual attendance at the University. Winner for 1920: Miss Barbara Villy.

Daughters of the Empire Bursary. A Bursary of \$250 a year for four years, offered by the Imperial Order of the Daughters of the Empire as a part of its War Memorial, awarded to the candidate in Matriculation examinations, who, in the judgment of the Committee, best meets the purpose in view in the foundation of the Bursary. The candidate must be the son or daughter of a killed or permanently disabled soldier, sailor, or member of the air force. It is tenable at the University of Alberta.

Equivalent Examinations

The Grade IX certificate of Alberta is accepted in the subjects of British History, the Grade X certificate in the subjects of English Grammar and Canadian History, the Grade XI certificate pro tanto for the other subjects of matriculation and the Grade XII certificate pro tanto for the first year courses in Arts and Sciences at the University. Requests for exemption from the matriculation examination based on these or other certificates should be addressed to the Registrar, University of Alberta.

Advanced Standing

Any student of another university wishing to be admitted to this university with equivalent standing is required to send with his application:

1. A calendar of the university in which he has studied.
2. A detailed transcript of his record.
3. Honourable dismissal from the University at which he has studied.

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Matriculation Examination Requirements

A.—For those not presenting Grade IX and X certificates.

1.—For those intending to take the course leading to B.A., B.Sc. in Arts, B. Sc. in Household Economics, or B.Com.

1. **English Grammar**
2. **English Composition.**
3. **English Literature.**
4. **British and Canadian History.**
5. **History** (General and Canadian Constitutional).
6. **Arithmetic.**
7. **Algebra.**
8. **Geometry.**
9. and 10. Two of the following: **Latin, French, German, Greek.**
11. One of the following: **Physics, Chemistry, Agriculture**, a third language (to be selected from 9 and 10)

II.—Those entering upon other courses are required to pass in subjects 1 to 8 inclusive, but there are certain variations in the remaining subjects, as follows:

For B.Sc. in Engineering.—A Modern Language, (French or German), Physics and Chemistry, and Grade XII standing in the following subjects: English, History, French or German, Algebra, Geometry, Trigonometry, and Physics, or the equivalent work in first year Arts at the University; no work in the first year Applied Science course to be allowed while the first year Arts course is being taken.

For B.Sc. in Architecture.—French and Physics, and certain original drawings (details on application).

For M.D., or D.D.S., or B.Sc. in Pharmacy.—Latin, Chemistry, Physics, and either French or German.

For LL.B., or Articles in Law.—The same as for B.A., except that Latin is obligatory.

III.—(a) For those intending to take the three years course leading to the degree of B.S.A., the entrance requirement is a Certificate of Qualification from a Provincial School of Agriculture, or its equivalent.

MATRICULATION EXAMINATION REQUIREMENTS

- (b) For those intending to take the three years course leading to the degree of B.H.Ec., the entrance requirement is a Certificate of Qualification from a Provincial School of Agriculture. In addition to the recommendation of the Principal of a School of Agriculture, candidates for the three years course must produce a certificate of having passed all the regular examinations of the second year at one of the Schools of Agriculture with a least 60 per cent. of the marks in each subject.

For information regarding the requirements leading to the Licentiate Diploma in Pharmacy, apply to the Registrar of the University.

B.—For those presenting Grade IX and X certificates.

- 1.—For those intending to take the course leading to the degree of B.A., B.Sc. in Arts, B.Sc. in Household Economics, or B.Com.,

1. **English Composition.**
2. **English Literature.**
3. **History.** (General and Canadian Constitutional).
4. **Arithmetic.**
5. **Algebra.**
6. **Geometry.**
- *7. **Latin, or Greek, or French or German.**
8. and 9. Two of the following: **Physics, Chemistry, Agriculture**, a second language selected from No. 7.

- II.—For the course leading to the degree of LL.B.: the same as for B.A., except that Latin is obligatory.

- III.—For those intending to take B.Sc. course in Engineering:
As for B.A., subjects 1 to 6 (inclusive), and French or German, Physics and Chemistry, of Grade XI; and the following subjects of Grade XII: English, History French (or German), Algebra, Geometry, Trigonometry, Physics; or the equivalent work in first year Arts at the University; no work in the first year Applied Science course to be allowed while the first year Arts course is being taken.

*Students taking two sciences for Matriculation must take a beginner's language course in the first year.

UNIVERSITY OF ALBERTA

IV.—For those intending to take the B.Sc. course in Architecture:

1. **English Composition.**
2. **English Literature.**
3. **History.** (General and Canadian Constitutional).
4. **Algebra.**
5. **Geometry.**
6. **French or German.**
7. **Physics.**

Students entering the Architectural Course are also required at the beginning of the session to submit to the head of the department certain original drawings, (details on application).

V.—For those intending to take the M.D. course, or the course in Dentistry, or the B.Sc. course in Pharmacy:

1. **English Composition.**
2. **English Literature.**
3. **History.** (General and Canadian Constitutional.)
4. **Algebra.**
5. **Geometry.**
6. **Latin.**
7. **Chemistry.**
8. **Physics.**
9. **French or German.**

For students entering upon combined courses, the matriculation requirements are those of the Faculty of Arts and Sciences.

Details of Matriculation Subjects

English Composition.

Essays based chiefly on subjects chosen from the texts prescribed for collateral reading. Text Book: *Ontario High School English Composition* (Copp, Clark Co.).

English Literature.

Every candidate is required to pass an examination based on the following texts. Precise knowledge of the subject matter and a reasonable acquaintance with form will be expected.

Poetry.

Shakespeare: *Julius Caesar*; Tennyson: *The Passing of Arthur*; Selected lyrics (Palgrave's Golden Treasury): "*Eternal Spirit of the chainless mind*" (Byron); "*When I have borne in memory what has*

DETAILS OF MATRICULATION SUBJECTS

tamed" (Wordsworth); "O friend, I know not which way I must look" (Wordsworth); "If aught of oaten stop or pastoral song" (Collins); "O Wild West Wind, thou breath'st of Autumn's being" (Shelley); "Ye distant spires, ye antique towers" (Gray); "Of a' the airts the wind can blaw" (Burns); "Why weep ye by the tide, ladie" (Scott); "Our bugles sang truce, for the night-cloud had lowered" (Campbell); "From Stirling Castle we had seen" (Wordsworth); "And is this Yarrow—this the stream" (Wordsworth).

Prose.

Macaulay: *Pitt*; Goldsmith: *The Vicar of Wakefield*.

Collateral Reading.

Irving: *Life of Goldsmith*; Thackeray: *Esmond*; Goldsmith: *The Deserted Village*.

History.

*(1) British and Canadian.—The outlines of British History with special reference to the period subsequent to 1485; outlines of Canadian history with special reference to the period subsequent to 1759; Dominion, Provincial and Municipal Civics. Text-books: *High School History of England* (Macmillan); Duncan, *The Canadian People*; Jenkins, *Canadian Civics* (Alberta edition).

(2) General and Canadian Constitutional. General history to the close of the Mediaeval period; constitutional history of Canada. Text-books: Botsford, *General History*; Bourinot, *How Canada is Governed*.

Algebra.

Elementary graphs and their application to represent a point on a line, a point on a plane, an algebraic expression, a linear equation involving two unknowns; square and cube roots; theory of indices; surds; quadratics; equations of the second degree involving one and two unknowns; problems involving quadratics; character of the roots and coefficients of a quadratic equation and problems to illustrate these relations. Text-book: Crawford, *High School Algebra*.

*Candidates who present Grades IX and X certificates may omit the paper on the outlines of British and Canadian History.

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Geometry.

Books III, IV and V. Propositions 4—8 (inclusive) of additional Propositions. Exercises and review. Text-book: Baker, *Theoretical Geometry for Schools*.

French.

Grammar. Review work of preceding grades; all irregular verbs. Reference book: *The New Fraser and Squair Complete French Grammar*.

Reading and Composition. Translation of the prescribed French Literature; translation at sight of passages of average difficulty from texts not prescribed; simple written composition; special emphasis on oral composition. Text-book: Labiche et Martin, *La Poudre aux Yeux* (Holt).

The examination in French will consist of a written examination (two papers on Authors, Sight Translation and Grammar), and an oral test including dictation based on the prescribed readings. Of the total marks for the subject, 25% will be based on the oral test, 25% on translation, and 50% on grammar and written composition.

German.

Grammar. Review work of preceding grades and cover remainder of text book. Text-book: Collar, *First Year German*.

Reading and Composition. Translation of the prescribed literature; translation at sight of passages of average difficulty from texts not prescribed; simple written composition and special emphasis on oral composition. Text-book: Ernst, *Flachsmann als Erzieher* (Ginn & Co.).

The examination in German will consist of a written test in Grammar and Composition; a written test based on the prescribed Authors and Sight Translation, and an oral test in Conversation and Dictation. Of the total marks for the subject, 25% will be based on the oral test, 25% on translation, and 50% on Grammar and Composition.

Greek.

(a) Grammar. The examination in this part of the work will be designed chiefly to test the student's mastery of Greek accidence.

(b) Composition. Short English sentences for translation into Greek, involving the more common idioms of Greek prose.

DETAILS OF MATRICULATION SUBJECTS

(c) Literature. *Anabasis I*, Chapters 1—5 (inclusive); Macmillan's *Elementary Classics*.

Sight translation from easy narrative prose.

Questions on the subject-matter of the text prescribed.

Latin.

Grammar and Composition. Text-book: Robertson and Caruthers's, *Ontario High School Latin Book*.

Literature. Caesar, *Bellum Gallicum*, Book IV, Chaps. 20—38, and Book V, Chaps. 1—23; Virgil, *Aeneid*, Book I, lines 1—215.

The examination in Latin will consist of two papers, one on the Authors and Sight Translation, the other on the Grammar and Composition. One-third of the marks for the former paper will be assigned to Sight Translation.

Chemistry.

Text-book: Cornish, *Chemistry*. As in the prescribed text. The course shall be conducted experimentally as far as possible.

Physics.

Text-book: Merchant and Chant, *The Ontario High School Physics*, Chapters 18—23 (inclusive), Chapters 32—39 (inclusive), Chapters 41—48 (inclusive), and Chapter 50.

Agriculture.

"The course in Agriculture for Grade XI." For syllabus apply to the Registrar.

For details of Grade XII subjects see the regulations of the Department of Education.

Undergraduate Scholarships, Prizes and Medals

Scholarships

The Women's University Club Scholarship. This scholarship, of the value of \$50, will be awarded to the woman student who takes the highest standing in the work of the First Year of the Faculty of Arts and Sciences, provided that, to secure the award, an average of not less than seventy-five per cent. be obtained on the work of the year. Further, the award will be contingent upon the student's proceeding with the work of the second year and will be paid only after the student has been in actual attendance in the second year of her course.

The Scholarships of the College of Physicians and Surgeons of the Province of Alberta. These are five in number and will be awarded as follows:

1. One to the student taking the highest average mark in the work of the freshman year.
2. One to the student taking the highest average mark in all courses in pure Physiology of the second and third years.
3. One to the student taking the highest average mark in all the courses in Anatomy of the second and third years.
4. One to the student taking the highest average mark in Surgery at the end of the final year.
5. One to the student taking the highest average mark in Medicine at the end of the final year.

Prizes

The Jane Alexander Memorial Prizes. These are offered annually by Professor W. H. Alexander, in memory of his mother. The subjects are:

1. Latin Prose Composition and Latin Sight Translation (by special examination).
2. Geology, on the basis of the regular tests and examinations in Geology 51 and 52.

PRIZES

The Gordon Stanley Fife Memorial Prize, offered by Professor A. L. Burt, in memory of his colleague, and to be awarded to the graduating student who has taken the highest average mark in two or more Senior History Courses.

Prize in the History of Medicine, offered by Dr. H. C. Jamieson for an essay on some phase of the earlier development of Anatomy or Physiology.

The Harold Waldo Huestis Memorial Prize. A prize to the value of \$25, to be awarded at the spring Convocation each year, to the second year student, taking five full courses, who has obtained the highest mark in English of the second year, provided that the student has displayed marked proficiency in English Composition.

The Bennett Prize. A first prize of \$60, and a second prize of \$40 open for competition to all students in the University and affiliated colleges except those of graduate standing. The award of these prizes is based upon:

- (a) An essay on a prescribed body of material having to do with intelligent and effective Canadian citizenship.
- (b) An examination (for which only those who have written the essays are eligible) on a part or all of the material described in section (a).

A representative committee of five members will be appointed to select the topic for the essay, to prescribe the reading, to set the examination and to act as judges in making the award.

For details for the current session apply to the Registrar.

Prize in Mathematics, of the value of \$10 each, offered by Dr. E. W. Sheldon and Mr. C. E. Race:

1. A prize open to students taking Mathematics 3, the award being based on the marks made in the regular work of the year as well as in a special problem paper.
2. A prize for those students in Mathematics 1 who are not taking Mathematics 3, the award to be based on the marks in Mathematics 1 and in a special problem paper.

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The Samuel Richard Hosford Memorial Prize. A prize of books valued at \$15, to be awarded to the undergraduate student making the best record in English 53.

The Vallée French Prize. The Vallée French Prize in books, offered by Professor A. Vallée, of Laval University, in remembrance of the Honourable P. J. O. Chauveau, first Prime Minister of the Province of Quebec, open to undergraduates registered in French 1 and 3, and to be awarded on the results of a special examination.

Société du Parler Français Prize. A prize of books of the value of ten dollars, offered by the Société du Parler Français, to the student enrolled in French 2 and 4 who makes the best average record in the test and final examinations in these two courses.

Le Comité Permanent de la Langue Française Prize. A Prize of books of the value of fifteen dollars, offered by Le Comité Permanent de la Langue Française, to the student making the best record in French 54.

Historical Club Prize. An annual prize of books of the value of fifteen dollars, offered by the Historical Club of the University of Alberta, to the student making the best record in History 2, provided such student receive first class standing on his year's work in History and pass in all other subjects.

The Engineering Institute of Canada offers four prizes yearly for papers presented by the student members of the Institute. Particulars may be obtained from the head of the Department of Engineering.

Medals

1. **The Governor-General's Gold Medal**, offered by His Excellency, the Governor-General of Canada, for the highest standing in the two senior years of the Faculty of Agriculture.

2. **The Charles Allan Stuart Gold Medal**, offered by the Hon. Mr. Justice Stuart, Chancellor of the University, and open for competition to students in the graduating year, reading for honours in the Department of Classics.

MEDALS

3. **The Alexander Cameron Rutherford Gold Medal**, offered by the Hon. A. C. Rutherford, LL.D., and open for competition to students in the graduating year, reading for honours in the Department of English.

4. **The Women's University Club Gold Medal**, offered by the Women's University Club of Edmonton, and awarded to that student in the graduating class of the Faculty of Arts and Sciences, general course, who takes the highest standing in the eight senior courses required in the third and fourth years, provided that an average mark of not less than seventy-five per cent. be obtained.

5. **The John A. McDougall Gold Medal**, offered by John A. McDougall, Esq., and awarded to the student taking the highest standing in the senior courses required in the last two years in Applied Science, provided, however, that an average mark of not less than seventy-five per cent. be obtained.

6. **The Lieutenant-Governor's Gold Medal** for the study of Shakespeare.

This medal is open for competition to students in any department of the University and in any one of the affiliated colleges, but not to students of graduate status. The award is based upon:

- (a) An examination upon a small group of Shakespeare's plays, the titles to be announced in each spring for the ensuing year.
- (b) An essay on a subject selected by a representative committee nominated by the President of the University.

For 1921-22, the plays under (a) are: Shakespeare's *Julius Caesar*, *Coriolanus*, and *Antony and Cleopatra*; Dryden's *All for Love*. The essay subject under (b) for 1921-22 is: "A comparative study of Shakespeare's *Antony and Cleopatra*, and Dryden's *All for Love*". The following texts are also to be studied: North's *Plutarch, Life of Antonius*; Dryden's *Essay of Dramatic Poesy*, and *Preface to All for Love*. For 1921-22 the committee consists of Professor Broadus, Chairman; Dean Kerr, and Professor Gordon.

8. **The Chief Justice's Gold Medal**, offered by the Honourable Horace Harvey, Chief Justice of Alberta, for highest standing in the work prescribed for the LL.B. degree.

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9. **The James Ramsey Gold Medal**, offered by James Ramsey, Esq., M.L.A., and open to students in the graduating year, reading for honours in the Department of Mathematics.

10. **The Moshier Memorial Medal**, offered by the Volunteer Overseas Medical Officers Association of Edmonton, in memory of the late Lieutenant-Colonel H. H. Moshier, to be awarded for general proficiency in the Faculty of Medicine, upon completion of the courses offered at this University.

Graduate Fellowship

The Lloyd Hartnoll Bishop Memorial Fellowship in English Literature

A fellowship in English Literature has been founded by E. T. Bishop, Esq., to be known as the Lloyd Hartnoll Bishop Memorial Fellowship, and to be conferred on the graduating student who, during his undergraduate course, has shown unmistakable evidence of literary ability. The present emolument of this Fellowship is \$200.00. Attention is called to the fact that this is a special award and not necessarily given each year.

Daughters of the Empire Post-Graduate Overseas Scholarship

This scholarship was founded by the Imperial Order, Daughters of the Empire, as part of the War Memorial of the Order. It is of the value of \$1400.00, tenable for one year in any British University, the subjects of study being specified as British and Imperial History, the economics and government of the Empire and Dominion, or any subject vital to the interest of the Empire. The scholarship is open to men and women, British subjects, unmarried, graduates of a Canadian University or in the last year of a course leading to a degree.

In awarding the scholarship, the committee of selection will take into consideration the war services of the candidate, and the members of his or her family, and, other things being equal, will give preference to a returned soldier, his sister or child.

SCHOLARSHIPS

The Rhodes Scholarships

In addition to the preceding Scholarships, Prizes and Medals which are under the control of the University of Alberta, there is also available for the Province of Alberta each year one Rhodes Scholarship. The permanent committee of selection for the Province of Alberta is as follows:

His Honour, the Lieutenant-Governor, Chairman.
The Honourable, the Chief Justice of the Province.
The Honourable, the Minister of Education.
The Chancellor of the University of Alberta.
The President of the University of Alberta.
Professor Burt.
Secretary of the Committee, D. S. MacKenzie, Esq.

Candidates must be at least in their sophomore year at a recognized degree-granting university or college of Canada, and (if elected) must complete the work of that year before going into residence at Oxford. Competitive examinations may be held under the auspices of the provincial committees. Each scholarship is tenable for three years, with a stipend of £350 per annum.

The following students of the University of Alberta have obtained this scholarship:

1913—Walters Farrel Dyde.
1915—Henry Grattan Nolan.
1917—Henry Alexander Dyde.
1918—Allan Burnside Harvey.
1919—Daniel Roland Michener.
1920—Walker Dunham.
1921—George Victor Ferguson.

University Regulations

Fees

The University reserves to itself the right to change these fees from year to year without notice.

I.—In Arts (including degree courses in Pharmacy and Household Economics:

(a) Undergraduates and Conditioned Students:	
Instruction per session	\$ 30.00
Students' Union (compulsory)	7.00
(b) Special and Partial Students—	
Registration Fee	2.00
Instruction per session per course.....	9.00
*Students' Union (compulsory)	4.50
(c) Summer Students—	
Registration Fee	1.00
Instruction per session per course.....	4.50

II.—In Applied Science:

(a) Undergraduates and Conditioned Students—	
Instruction per session, first and second years	60.00
Instruction per session, in subsequent years	80.00
Students' Union (compulsory)	7.00
(b) Special Students:	
Registration Fee	4.00
Instruction per session, per course	18.00
*Students' Union (compulsory)	4.50

III.—In Law:

Instruction per session	15.00
Examination Fee (payable to Law Society)	15.00
*Students' Union (compulsory for students in attendance	7.00

IV.—In Medicine and Dentistry:

Instruction per session, first year	75.00
Instruction per session, in subsequent years	100.00
Students' Union (compulsory)	7.00

*Special students taking two full courses in the University have at registration the option of paying the full Union fee of \$7.00, entitling them to full voting privileges.

FEES

V.—In Accountancy (Evening Classes):	
Instruction per session (Intermediate course)	25.00
Instruction per session (Final course)	50.00
VI.—Pharmacy Licensing Course:	
Instruction per session, first year	50.00
Instruction per session, second year	75.00
VII.—In Agriculture (including the three year course in Household Economics):	
(No fee for instruction for the present).	
Students' Union (compulsory)	7.00
VIII.—Graduate Courses:	
Master of Arts	15.00
Bachelor of Divinity	15.00
IX.—Medical service fee (required of all students)	3.00
X.—Caution Money: Every student is required to deposit \$5.00 caution money to cover dam- ages done to furniture, apparatus, books, etc. This amount, less any necessary de- ductions, will be returned at the end of the session. Breakages exceeding this amount must be paid for before the student is per- mitted to take any examination.	
XI.—For viséing Certificates	2.00
XII.—For Transcript of Record	1.00
XIII.—For Supplemental Examinations:	
Each subject.....	3.00
For Special Supplementals:	
First subject	10.00
Each additional subject	5.00
XIV.—For Degrees (whether in course or ad eundem):	
B.A.	5.00
B.Sc. in Arts	5.00
B.Sc. in Pharmacy	5.00
B.Sc. in Household Economics	5.00
B. Com.	5.00
B.Sc. in Applied Science.....	10.00
M.A.	10.00
M.Sc.	10.00
M.D.	10.00
LL.B.	10.00
B.S.A.	10.00
B.D.	10.00

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Room and Board

Room and Board in residences, October 1st to	
May 1st	\$280.00
Board only, payable in advance, per month	28.00
Meal ticket (21 meals)	7.75

Registration

All persons desiring to take courses in the University must register before being regularly enrolled. Registration may take place on and after the first day of March, and should be completed by the student in person on or before the 28th September, 1921. Students registering for the first time are requested to fill out an application form and submit it along with their certificates for consideration early in September or sooner if possible. Students applying for registration after the fifth day of October will be permitted to register only upon satisfying the Examinations Committee as to the validity of their reasons for late entrance, and as to their ability to proceed with their courses. Registration forms are to be filled in by the students in consultation with the Registration Committee and passed upon by the Registrar.

Students are required to register for courses in which they are deficient before registering for other courses. The Faculty Councils reserve the right to adjust courses to meet the requirements of the time-table. When the programme of work for which a student is seeking registration has been approved, he may obtain his cards of admission at the Cashier's desk on payment of the proper fees. The student must present one of these cards to each of his instructors in order that his name may be placed upon the class record.

Attendance and Lateness

(a) Regular and punctual attendance at lectures and laboratory periods is required of each student. No student will be permitted to take the final examination in any course if his absences exceed ten periods in courses of three periods a week throughout the session, six periods in courses of two periods a week, or four periods in courses of one period a week. Absences are counted from the beginning of the term.

EXAMINATIONS

(b) Students desiring to present excuses for absence on the ground of sickness or physical disability must, within one week of the date when that absence occurred or when the period of absence terminated, report their wish to the Registrar. This officer will promptly forward to the head of the University medical service the names of such students and the dates for which they claim exemption, and upon the endorsement of this claim by the proper authority such excuses will be filed to constitute part of the year's attendance record. No other form of excuse in regard to sickness or physical disability can be accepted.

Excuses for absence on the ground of domestic affliction must be presented to the Registrar direct and also within one week as above specified. Any other excuse which a student cares to present must be made within the same time limit to the Registrar in person, and the judgment of that officer upon its validity shall be final, subject to an appeal to the General Faculty Council.

Students who are late for any lecture or university exercise will be marked absent upon the records of the instructor in charge, unless at the end of the period in question they account satisfactorily to the instructor for their lateness, (in which case he will, without destroying the mark of absence, indicate his acceptance of the excuse by making an X over the a). The decision of the instructor shall be final, subject only to an appeal to the Committee on Examinations.

(c) Students desiring leave of absence in any given course must communicate their desire to the Registrar. When such leave of absence has been granted, the student is exempted from the operation of the attendance rule in section (a) above.

Examinations

The University examinations are conducted by a University Examining Board appointed by the Senate and are under the direction of the Committee on Examinations.

1. Sessional Examinations

(a) In Junior courses, as a rule, there are held two one-hour tests and one final examination. Fifteen per cent. of the whole credit in the course is assigned to each test. In English 1, however, and in the composition courses in French,

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German, Greek and Latin, tests are replaced by weekly exercises throughout the year, and to these exercises is assigned fifty per cent. of the whole credit in the course. The same arrangement exists with regard to junior courses in Mathematics and in Physics I, where regular weekly exercises and short problem papers supplement the normal test papers.

(b) In certain senior courses the test examination method is followed; and fifteen per cent. of the whole credit in the course is assigned to each test. In other senior courses the assignment of thirty per cent. for term work is allotted to essays and practical examinations. In certain senior courses, subject to the approval of the General Faculty Council, term tests may be eliminated and the evaluation be on the final examination alone. Announcement is made at the beginning of the session as to the policy to be pursued by each department in this respect.

(c) In each course there is held a final examination. Seventy per cent. of the whole credit in the course is assigned to this examination, except in the case of certain junior courses referred to in paragraph (a) where the allotment is fifty per cent. only. The final examinations are held at the end of the session except in courses completed before Christmas; in such courses the final examinations are held during the last week of lectures in December. In these courses the allotment of marks is seventy per cent. to the final examination and thirty per cent. to the test.

(d) When a student is absent from a test his mark for that test is zero. However, in case of illness or domestic affliction an application for aegrotat standing (ie., an allowance of 50 per cent. for a test missed by illness, if required for a pass) will be considered if such application is made immediately, in writing, to the Registrar. In the case of illness causing absence from final examination, the general rule is that supplementals in September are granted to students of the first and second years whose terms record is satisfactory. In the case of senior students, the Faculty may grant aegrotat standing under similar circumstances.

(e) When intercollegiate games or conferences fall within any period of tests, members and officers of the teams and official delegates to conferences shall, at least one week before the beginning of the test period, make a request in writing to the Registrar in order that a readjustment of the time-table may be considered.

EXAMINATIONS

(f) In the publication of standing in the various courses, students are grouped by classes, the first class comprising those who have obtained eighty-five per cent. and over, the second class, those who have obtained between sixty-five and eighty-four per cent., and the third class, those who have obtained between fifty and sixty-four per cent. Fifty per cent. is the minimum for a pass.

(g) Final examination papers may be re-read on an appeal, accompanied by a fee of \$5, being made to the Registrar within sixty days after the publication of the results, the fee to be returned if the appeal is sustained and the student passed in the course.

2. Supplemental Examinations

Supplemental examinations are conducted by the University in September of each year for students who have failed in any course the preceding year, but whose attendance record was satisfactory and whose final average was at least 30%. In reckoning standing for a supplemental examination, the credits already obtained in the tests will apply as described above under Sessional Examinations. Students neglecting to take or failing to pass the supplemental examination are required to repeat the course. A fee of \$3 is charged for each of these supplemental examinations. For any special examination granted by a Faculty Council, to be held at any other time than the regular date for supplemental examinations a fee of \$10 is charged for the first subject and \$5 for each additional subject taken at the same time.

All applications for permission to take supplemental examinations must be made in writing to the Registrar, and in the case of the regular supplemental examinations, will be received up to the first day of September. The examinations will begin on the first day of Freshman Registration.

Special supplemental examinations will be granted (by the Committee on Examinations) only under exceptional circumstances. An application for a special supplemental must be accompanied, in the case of illness, by a medical certificate, and in the case of employment under contract, by a statement from the employer certifying the date on which the student's contract expired.

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Application for special supplementals will be received up to the tenth day of October, and these examinations shall be conducted as soon as possible thereafter, at dates determined by the Committee on Examinations.

Students in Agriculture may be admitted to supplemental examinations at or about the time of the beginning of lectures in Agriculture at the regular fee of \$3 per paper, except in cases where such supplementals would involve the setting of more than one supplemental paper in any course, in which case the special fee of \$10 shall apply.

Either by statutory provision or by agreement the examinations for the right to secure registration with the following professional societies in the Province of Alberta are under the control of the University:—

The Alberta Association of Architects.

The Alberta Land Surveyors' Association.

The Alberta Dental Association.

The College of Physicians and Surgeons of Alberta.

The Law Society of Alberta.

The Alberta Pharmaceutical Association.

The Institute of Chartered Accountants of Alberta.

The Association of Registered Nurses of Alberta.

The Association of Professional Engineers of Alberta.

The Veterinary Association of Alberta.

The Alberta Optometric Association.

Information with respect to these examinations can be obtained on application to the Registrar.

Discipline

The Provost is the chief disciplinary officer of the University. He exercises general supervision over the conduct and welfare of the students, especially with regard to the students in residence.

By resolution of the Senate, a Committee on Student Affairs has been constituted as follows: "The President of the University, the Chancellor, the Chairman of the Board, the Provost, one member to be elected from each Faculty;

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two members to be elected from the Senate (these not to be Faculty representatives); the Adviser to women students; the president of the Students' Union; the president of the Athletic Society; the president of the Literary Department of the Students' Union; the president of the Wauneita Society; the editor-in-chief of "The Gateway"; three members to be elected from the Students' Council."

Under the same resolution, the duties of this Committee are:

- (1) "to deal with
 - (a) all matters referred to in the University Act, Article 41, subsections 18 and 19;
 - (b) all other matters relating to students' interests not therein referred to provided that in the event of any decision of this committee being challenged by a non-student member, the decision must, to be valid, be ratified by a majority of the non-student members present; provided further that the right of appeal to the Senate against any such decision shall lie with the student members."
- (2) for misconduct in the lecture-room, a student may be required by the instructor to leave the lecture-room. Persistent misconduct shall be reported to the President of the University, who may suspend from lectures pending the action of the Committee on Student Affairs.
- (3) The following disciplinary ruling with regard to Athletics, submitted by the Faculty of Arts and Sciences and the Students' Union, was adopted by the Senate at its meeting of March 31st, 1911:

"Hereafter no persons except **bona fide** students who are in attendance at the University, or at one of the group of organized affiliated colleges carrying full work and whose scholastic record is certified as satisfactory by the Faculty Council of the University or by the respective colleges in which they are registered, shall be permitted to play on or be officers of any athletic team representing the University of Alberta.

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The Faculty Council has entrusted to the Committee on Scholastic Standing the administration of these regulations which have been enlarged to include the following activities:

1. Athletics: All competitions with outside organizations whether conducted within or outside of the University.
2. Dramatic Performances: (a) The annual play of the Dramatic Society, (b) The French play.
3. Debates: All debates with outside organizations, whether conducted within or outside of the University.
4. Such other activities of general interest as may be submitted to the Faculty for its approval from time to time.

By **bona-fide** students shall be understood:

- (a) Students who are doing full undergraduate work in the University.
 - (b) Graduate students in attendance following any course of studies leading to a degree.
 - (c) Students in affiliated colleges, taking two full courses of university grade in the University.
 - (d) Other special students, being fully matriculated, who are taking two full courses of university grade in the University.
- (4) In all cases of discipline involving offences against the student body, a student may appeal from decisions of that body or of any court constituted by it, to the Committee on Student Affairs.
 - (5) No student shall be permitted to continue in attendance at the University whose presence is for any cause deemed by the Committee on Student Affairs prejudicial to the interests of the University.
 - (6) All regulations affecting the Students' Union and the Students' Court are subject to the approval of the Committee on Student Affairs.

RESIDENCES

Withdrawal of Students

In accordance with the regulation of the Senate, passed May 11th, 1921, a student whose record in the class-room, in tests, or in final examinations is unsatisfactory, may at any time be required to withdraw from the University.

Residences

Residential accommodation is provided in the University for four hundred students. All students not living with parents or guardians must reside in the University residences or in places approved of by the University authorities.

Rooms will be assigned by the Provost and applications for reservations, accompanied by twelve dollars (\$12.00), must be in the hands of the Bursar by September 5th. Reservations will not be held after September 30th, unless arrangements are made with the Bursar.

Each student to whom a room is assigned will be required to deposit one dollar (\$1.00) for keys and will receive a red ticket showing name, number of room, and date of entry. Upon presentation of this ticket to the House Superintendent, keys will be issued. Students vacating rooms during, or at the end of the term, must return this red ticket to the Cashier, signed by the House Superintendent, showing date of leaving, in order to obtain any rebate or deposit on keys.

Students must notify the Bursar before vacating rooms, otherwise no rebate will be considered. No exchange of rooms will be allowed unless arrangements are made with the Bursar and approved by the Provost.

Room and Board is payable in advance. Arrangements for monthly payments may be made with the Bursar. Students leaving the University during Christmas holidays will be allowed rebate at the rate of ninety cents per day for Board only, from December 23rd to January 2nd, but application must be made to the Bursar before leaving so that rebate may be arranged for. Students arriving before October 1st or leaving after May 1st will be charged at the rate of \$1.35 per day.

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Students not residing in the University residences may obtain meals in the University dining room by purchasing red and white tickets from the Cashier at the rate of twenty-eight dollars (\$28.00) per month, which arrangement is presumed to continue throughout the term 1921-22 unless the students notify the Bursar otherwise. Students may also obtain white tickets for twenty-one meals at the rate of \$7.75 per ticket which may be used at any time.

The conduct of students in residence is subject to the authority of the House Committee, under the Board of Governors. This committee consists of the Provost, the Adviser to Women Students and two resident students from each of the University Halls. A special sub-committee of the House Committee, under the direction of the Adviser to Women Students, will deal with matters relating solely to the women students. The resident members shall be fourth year or graduate students and shall be elected within two weeks after the beginning of the session. Any vacancy thereafter occurring shall be filled at a special election to be held within two weeks after the occurrence of the said vacancy. Only students who have been in residence at least one year shall have the right to vote at elections of members of the House Committee.

In all cases of discipline involving, or appearing to involve, the interests of the residences, a student may appeal from decisions of the Students' Union or of any student court to the House Committee.

Medical Service

All students registered in the University are required by the Students' Union to pay an annual fee of three dollars which is applied to the maintenance of a Medical Service Fund. This trust fund is administered by a committee consisting of the President of the University, the Provost, the Medical Director and the President of the Students' Union. In return for the fee paid, students are entitled to free medical treatment in case of illness or accident during the academic year. This includes provision for hospital charges, nursing, medicine, ambulance, physician's fees and the cost of minor operations. No provision, however, is made for cases of illness contracted before the beginning of the session, chronic diseases, major operations, or cases not immediately reported

ACADEMIC COSTUME

to the Medical Director. The Medical Director will in all cases decide if transference to the hospital is advisable and if so, what accommodation is necessary. He shall also decide who the attending physician shall be, and in the event of operation shall determine to what consideration the patient is entitled. The Medical Director also certifies to the Registrar with regard to exemptions from lectures or tests claimed by students on the ground of sickness.

Student Functions

All student functions are conducted under the general supervision of the Provost, and except by special permission are held in the University buildings. A written communication for permission to use a University Building for such purpose must be addressed to the Provost at least ten days before the date set for any function.

Meetings of Student Societies

Applications for the use of rooms for students' meetings must be made to the Registrar.

Academic Costume

By a resolution of the Senate, students of the senior years are required to wear gowns at all classes and lectures, and at such functions as may at any time be specified.

All gowns are to be of the customary Cambridge shape; i.e., for undergraduates a black stuff gown not falling below the knee with round sleeve cut above elbow; for bachelors, a black stuff gown falling below the knee with full sleeve cut to elbow and terminating in a point; for masters, a black stuff or silk gown falling below the knee with long sleeves with semi-circular cut at bottom.

Hoods are to be of the Oxford pattern, except those for the doctorate, which shall be of the Cambridge form.

Bachelors' and Masters' hoods are to be of a spruce green silk, with, for bachelors, a border ($1\frac{1}{2}$ inches each way); for masters, a full lining of the color distinctive of the faculty.

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The faculty colours are:	Green and
For Arts (including LL.D.)	White.
For Science	Light Green
For Law	Cream
For Medicine	Rose
For Agriculture	Pale Blue
For Education	Lilac
For Dentistry	Buff
For Pharmacy	Cinnamon
For Divinity	Purple
For Household Economics	Pink

Doctors' hoods are to be of scarlet silk, with a full lining of the respective faculty colour, the M.D. hood to be of the master's pattern.

Doctors are entitled to wear a full dress scarlet robe faced with silk of the respective faculty colour.

All caps are to be of the ordinary black trencher shape with black tassels, with a black velvet cap with gold cord for doctor's full dress.

For the convenience of students, the University maintains a book store where textbooks prescribed in the University calendar may be obtained. Gowns, drawing material, athletic costumes and other accessories are also kept in stock.

Organization of Faculties

The University reserves the right to modify or withdraw for the session any of the courses here outlined.

FACULTY OF ARTS AND SCIENCES

The courses leading to the degrees of B.A., B.Sc. in Arts, B.Sc. in Household Economics, B.Sc. in Pharmacy and B.Com. are divided into two groups—junior courses and senior courses. A course is to be regarded as designating normally three hours lectures or three hours lectures and three hours laboratory work in a subject each week throughout the session. The junior courses are designed for students in the first and second years, the senior courses for the third and fourth years. The junior courses are, in general, to be regarded as preparatory to the senior courses.

Certain University courses in the first and second years are offered in co-operation with the Summer School for Teachers which is held annually in the months of July and August at the University of Alberta. Detailed information may be obtained from the Dean.

Students must continue two subjects throughout the third and fourth years.

Students may be exempted from two senior courses selected from Divisions A and B by presenting certificates of having satisfactorily completed an equivalent amount of work in one of the organized affiliated theological colleges.

A common first year is laid down for all students in the Faculty of Arts and Sciences, but, thereafter, in accordance with a classification of studies into three general groups, courses are with certain restrictions largely elective.

Divisions of Courses of Instruction

- A. Languages and Literatures.
- B. Philosophy, History, and Political Economy.
- C. Mathematics, and Natural Sciences.

In accordance with this scheme the Junior, Senior, Honours, and Graduate courses leading to the degrees of B.A., B.Sc. in Arts, M.A., and M.Sc., are classified as follows:

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DIVISION A Lang. and Lit.

DIVISION B Philos., Hist. and Pol. Econ.

DIVISION C Math. and Natural Sciences

*Junior Courses—First Year:

English: 1.	Hist.: 1.	Math.: 1, 2, 3.
French: A, 1 & 3.		Physics: 1a, 1b.
Greek: 1.		
German: A, 1 & 3.		
Latin: A, 1 & 3.		

*Junior Courses—Second Year:

English: 2.	Hist.: 2, 3.	Biol.: 1.
French: 4 & 5.	Phil.: 1, 2.	Chem.: 1.
German: 2 & 4.		xGeol.: 33.
Greek: 2 & 4.	Pol. Econ.: 1.	Math.: 7, 22, (55 & 56).
Latin: 2 & 4.		Physics: 3a & 3b, 6 8, 12.
		Zoology: 1.

Senior Courses:

English: 52, 53, 54, 55, 57, 59, 61.	Classical Phil.: 51.	Biochemistry: 61.
French: 53, 54.	Education: 51, 52.	Botany: 51, 52.
German: 53, 54.	Hist.: 53, 56, 57.	Chem.: 51, 52, 54, 55, 58.
Greek: 54.	Phil.: 51, 53, 54.	Geol.: 51, 53, 55, 62.
Hebrew: 51, 53.	Psychol.: 51, 52, 53, 54.	Math.: 53, 55, 56, 57, 62.
Latin: 53.	Pol. Ec.: 64, 65.	Physics: 51, 53, 54, 57.
	Architecture 62.	Physiol.: 61.
		H. Econ.: 51, 52.

Honours and Graduate Courses:

English: 106, 107.	Hist.: 101, 102.	Bot.: 101, 102, 103.
French: 101, 102.	Philos.: 101, 102, 103.	Chem.: 101, 102, 103.
German: 101, 102.	Pol. Ec.: 101.	Geol.: 101, 102, 103.
Latin: 101, 102, 103, 104, 111, 112, 113.	Psychol.: 101, 102, 103, 104, 105.	Math.: 101, 102, 103, 104, 105, 106, 107, 108, 109, 110.
		Physics: 101.

*And Phys. Ed.: 1 & 2.

xOpen only to candidates for Honours in Botany.

B.A.—GENERAL COURSE

DEGREE OF B.A. OR B.Sc. IN ARTS

FIRST YEAR

SUBJECT	Course No.	Lect. Hours	Pge.
English	English 1	3	121
*French	French 1 and 3	3	145
*German	German 1 and 3	3	147
*Greek	Greek 1 and 5	3	115
History	History 1	3	129
*Latin	Latin 1 and 3	3	113
Mathematics	Mathematics 1	3	137
Physics	Physics 1	3†	153
Physical Education	Physical Education 1 .....	..	161

†Three hours a week of laboratory work is also required.

*Any two of these are to be taken, but students presenting two sciences for matriculation must take a beginner's course language in the first year. See "A" Courses under departmental announcements.

With a view to enable entrance deficiencies in the languages to be overtaken, the opportunity is offered to students who have obtained at least second class standing in an "A" language course to pursue during the following summer, under the direction of the Department concerned, the respective sequent course in French 1, German 1 or Latin 1. Information respecting details may be had from the Registrar.

B.A.—GENERAL COURSE

- Second Year:**
1. One course from Division A.
 2. One course from Division B.
 3. One course from Division C.
 4. 5. *Two options.
 6. Physical Education 2.

*Permissible to take two of the five courses in one department, but not in more than one.

Students entering with Grade XII standing must elect either Chemistry or Physics of the second year.

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- Third Year:** 1. 2. Two courses from Division A.
3. One course from Division B.
4. *One option.

or

1. 2. Two courses from Division B.
3. One course from Division A.
4. *One option.

*Not more than two courses are to be selected from any one department.

- Fourth Year:** 1. 2. Two courses from Division A.
3. One course from Division B.
4. *One option.

or

1. 2. Two courses from Division B.
3. One course from Division A.
4. *One option.

*Not more than two courses are to be selected from any one department.

B.Sc. IN ARTS—GENERAL COURSE

The distinction between the B.A. and the B.Sc. in Arts becomes apparent in the second year. The student who in his second year chooses three courses from Division C is regarded as a candidate for the degree of B.Sc. in Arts.

- Second Year:** 1. One course from Division A.
2. One course from Division B.
3. 4. 5. *Three courses from Division C.
6. Physical Education 2.

*Not more than two courses are to be selected from any one department.

- Third Year:** 1. 2. Two courses from Division C.
3. One course from Division A or Division B.
4. *One option.

*This optional course to be related to one of the courses from Division C and to be approved by the Committee on Science studies.

- Fourth Year:** 1. 2. Two courses from Division C.
3. One course from Division A or Division B.
4. *One option.

*This optional course to be related to one of the courses from Division C and to be approved by the Committee on Science studies.

HONOURS COURSES—GENERAL REGULATIONS

DEGREES WITH HONOURS IN THE FACULTY OF ARTS AND SCIENCES

The courses in honours differ from the general courses in that they are planned with a view to specialization, and are open only to students who have displayed ability in the junior courses. Students must have in the second year attained Class I in the subjects in which they propose to specialize, in order to be eligible to read for Honours.

Students who have attained Class II in a subject may, by permission of the Committee on Honours, in consultation with the head of the department concerned, be allowed to proceed to Honours. The third year must be entered without conditions in any subject. Students must begin their courses in Honours in the third year, and in order to graduate with Honours, must continue through the third and fourth years.

HONOURS COURSES—GENERAL REGULATIONS

1. In general, Honours are granted by departments rather than by subjects.
2. Students in the second year, looking forward to reading for Honours in the third and fourth years, are required to take courses in two divisions, but in the third and fourth years may confine their work to one division, but not to one department.
3. Students reading for an Honours degree are required to take regularly at least four courses in each of the two final years.
4. Students shall be regarded as candidates for the B.Sc. in Arts who restrict all courses to Division C in the third and fourth years, and as candidates for the B.A. when they select an option in each of the third and fourth years from a second division.
5. Students are not permitted to take more than one course in a given year in any subject in which they are not reading for Honours.
6. Honours students wishing to secure the academic standing requisite for the Specialist's Certificate, to be issued by the Department of Education, must conform to the requirements laid down by the Department.

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HONOURS COURSES—DEPARTMENTAL REQUIREMENTS

Department of Botany

- Second Year:** Prerequisites to Honours in Botany.
Chem. 1; Botany 1; Geol. 33; one option from A or B; one option from Division C.
- Third Year:** Bot. 51; Geol. 51; Bot. 102; one option from a second division or 6 hrs practical Botany.
or
Bot. 51; Chem. 54; Bot. 102; one option from a second division or 6 hrs practical Botany.
- Fourth Year:** Bot. 52; Chem. 52; Bot. 101; one option in a second division or 6 hrs practical Botany.
or
Bot. 52; Biochemistry 61; Bot. 103; one option from a second division or 6 hrs practical Botany.

Department of Chemistry

- Second Year:** Prerequisites to Honours in Chemistry.
Chemistry; Mathematics; Physics 6; one option (affiliated subject recommended); one option in second division.
- Third Year:** B.A. or B.Sc.
Chem. 101; Chem. 51; Chem. 58; option.
or
B. Sc. only.
Chem. 103; Chem. 51; Mathematics; Physics.
- Fourth Year:** Chem. 102; Chem. 54; two options.
or
Chem. 104; Chem. 52; Chem. 58; option in a second department.

Department of Classics

- Second Year:** Prerequisites to Honours in Classics.
Latin 2 and 4; Greek 2 and 4; Classical Philology 51; English, one course; Philosophy or Economy, one course.

HONOURS COURSES—DEPARTMENTAL REQUIREMENTS

Third Year: Either Greek or Latin as a major; two courses (Latin 103, 53 or Greek 101, 56); Latin or Greek, one course (Latin 53, Greek 56) as a minor; one optional course.

Fourth Year: As for Third Year above. (Latin 103, 52 or Greek 101, 56); (Latin 52, Greek 56).

Note regarding the character of the Senior courses: of the major courses, one, specifically an Honours course; the second, a general course in which Honours students will follow a different line of work from that followed by the general student. The minor course to be a general course treated as the second major above.

Department of English

Second Year: Prerequisites to Group A.
English 2; Classical Philology 51; History 2; a foreign language; an option.

or

Prerequisites to Group B.
English 2; Classical Philology 51; Latin or French; History 3; an option.

Third Year: Group A.
English 52, 53, 54, 55, 57, 58, 59, 60, 61 (one of these; not all given every year); English 106; two options.

Group B.
English 52, 53, 54, 55, 57, 58, 59, 60, 61 (one of these; not all given every year); English 104; two options.

Fourth Year: Group A.
English 52, 53, 54, 55, 57, 58, 59, 60, 61 (one of these; not all given every year); English 107; two options.

Group B.
English 52, 53, 54, 55, 57, 58, 59, 60, 61 (one of these; not all given every year); English 105; two options.

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Department of History

Second Year: Prerequisites to Honours in History.
History 2; History 3; Pol. Econ. 1; English 2;
one option.

Third Year: History 101; History 57, (1921-22); any one
of the following: History 53, History 54, His-
tory 56; one option.

Fourth Year: History 102; History 58, (1922-23); any one
of the following: History 53, History 54,
History 56; one option.

Note: Students not possessing a fair reading
knowledge of French or German are
advised to take a Modern Language in
the first and second years.

Department of Mathematics

First Year: Prerequisites to Honours in Mathematics.
Recommended: Math. 3.

Second Year: Mathematics, two junior courses; Physics, one
junior course; one option in A or B; one op-
tion.

Third Year: Mathematics, one Honours course and two
senior courses; Physics or Pol. Ec., one senior
course.

Fourth Year: Mathematics, one Honours course and two
senior courses; one senior course (a Natural
Science, Pol. Ec., Education, Philosophy, or
Psychology).

Note: Students not possessing a fair reading
knowledge of French or German are
advised to take a Modern Language in
the first and second years.

Department of Modern Languages

Second Year: Prerequisites to Honours in Modern Languages.
French 5 and 4; German 2 and 4; English 2
or (for students intending to major in French)
Latin 2 and 4; History 2; Philosophy 1 or 2.

HONOURS COURSES—DEPARTMENTAL REQUIREMENTS

Third Year: French 53 and 54, (for 1921-22); German 53 or 54; English or one course from Division B.

or

German 53 and 54; French 53 or 54; English or one course from Division B.

Fourth Year: French 53 and 54, (for 1921-22); English or Phil. or Hist.; Conference Course 101 and 102.

or

German 53 and 54; English or Phil. or Hist.; Conference Course 101 and 102.

Notes: 1. Special prescribed summer readings will be allotted to all Honours students.

2. A thesis, the topic of which must be selected before the close of the third year, will be required of all students reading for Honours. This thesis must be in the hands of the head of the department by March 31 of the graduating year.

Department of Philosophy

Second Year: Prerequisites to Honours in Philosophy. Philosophy 1 or Philosophy 2; option in a second division; three free options.

Third Year: Phil., two courses; Psychol., one course; option in a second department.

or

Psychol., two courses; Phil., one course; option in a second department.

Fourth Year: Phil., two courses; Psychol., one course; option in a second department.

or

Psychol., two courses; Philos., one course; option in a second department.

Note: Honours students in the Department of Philosophy will meet one hour per week to discuss problems of contemporary philosophy.

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Department of Political Economy

- Second Year:** Prerequisites to Honours in Political Economy. Political Economy 1; Psychology 2; History 2; two options.
- Third Year:** Political Economy 101; Political Economy 64; Political Economy 65; one option.
- Fourth Year:** Political Economy 102; Political Economy 63; Political Economy 66 or 67; one option. Courses in Third and Fourth Year alternate.

Department of Physics

- Second Year:** Prerequisites to Honours in Physics. Physics; Math. 51; Math. 55 and 56; Chem. 1; one option from a second division.
- Third Year:** Physics, two courses; Math. 57; one option.
- Fourth Year:** Physics, two courses; one option in Division C; one option.

THE DEGREE OF B.Sc. IN HOUSEHOLD ECONOMICS

Junior Courses.

First Year: As for B.A.

Second Year: One course Division A; Chemistry 1; Zoology 1; Political Economy 1; Household Economics 2 and 3; Bacteriology 1, First term; Household Economics 1b, Second term; Physical Education 2.

Senior Courses.

Third Year: (1921-22). One course from Division A or B; Biochemistry, Lect. and Lab.; *Physiology, Lect.; Household Economics 55; Bacteriology 1, 52.

*Zoology for First term, instead of Physiology Lab.

THE DEGREE OF BACHELOR OF COMMERCE

Fourth Year: (1922-23). One course from Division A or B; Food Chemistry; Hygiene and Sanitation; Household Economics 56, 57, 58 and 59.

Third Year: (1922-23). One course from Division A or B; Chemistry 52; Physiology, Lect.; Biochemistry 61, Lect. and Lab.; Household Economics 55.

Fourth Year: (1923-24). One course from Division A or B; Food Chemistry; Hygiene and Sanitation; Household Economics 56, 57, 58, 59.

For an outline of the course leading to the degree of B.H.Ec., see the Faculty of Agriculture, p. 90.

THE DEGREE OF BACHELOR OF COMMERCE (B.Com.)

First Year: As for B.A.

Second Year:

1. Political Economy 1.
2. Economic Geology and Economic Geography.
3. A modern language (already taken for Matriculation and first year).
4. Accountancy 1.
5. Chemistry 1.
6. Phys. Ed. 2.

Third and Fourth Years:

1. Mathematics of Investments.
2. Currency, Banking and Finance.
3. Trade and Transportation.
4. Business Administration and Marketing.
5. Commercial Law.
6. A Modern Language (already taken in second year).
- 7 and 8. Any two of:
 - (a) A foreign language.
 - (b) Accountancy 51.
 - (c) Insurance.
 - (d) Statistics.
 - (e) Another course in Economics.
 - (f) Accountancy 52.
 - (g) Psychology.
 - (h) A science.

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II—THE B.Sc. DEGREE IN PHARMACY JUNIOR COURSES—FIRST YEAR

SUBJECT	Course No.	Lect. Hours	Pge.
English Composition	English 1	3	121
*French	French 1 and 3	3	145
History	History 1	3	129
Latin	Latin 1 and 3	3	113
Mathematics	Mathematics 1	3	137
Physics	Physics 1	3†	153
Physical Education	Physical Education 1	3	161

*German may be substituted for French at the option of the student.

†Three hours a week of laboratory work is also required.

JUNIOR COURSES—SECOND YEAR

SUBJECT	Course No.	Lect. Hours	Lab. Hours	Pge.
Botany	Biol. 1	3	3	103
Chemistry	Chem. 1	3	3	105
English	Eng. 2	3	..	121
Mathematics	Math. 7	3	..	138
History	Hist. 2	3	..	129
Zoology	Zool. 1	2	4	160
Physical Education	Phys. Ed. 2	3	..	161

In the second year History 2 is optional with Political Economy 1, and Mathematics 7 optional with Zoology 1.

SENIOR COURSES—THIRD YEAR

SUBJECT	Course No.	Lect. Hours	Lab. Hours	Pge.
Botany	Bot. 51	2	4	104
Chemistry	Chem. 52	3	3	106
Materia Medica	M. M. 51	4	..	136
Pharmacy	Pharm. 51, 52 & 54	4	6	150
Toxicology	Toxic. 1	1*	..	160

*First half session.

COMBINED COURSES

SENIOR COURSES—FOURTH YEAR

SUBJECT	Course No.	Lect. Hours	Lab. Hours	Pge.
Bacteriology	Bact. 1	2	..	102
Biochemistry	Bioch. 61	3	3	156
Chemistry	Chem. 51	3	3	106
Materia Medica	M. Med. 52	3	..	136
Pharmacy	Pharm. 55	..	6	149

COMBINED COURSES

Courses of study have been arranged associating the courses for the B.A. degree with those leading to degrees in the other Faculties. Details of these Combined Courses will be found in the statements of the associated Faculties; for B.A., B.Sc. on p. 78, for B.A., M.D. on p. 84, for B.A., LL.B. p. 85, and for B.A., B.S.A. on p. 89.

FACULTY OF APPLIED SCIENCE

The University offers two groups of courses in Applied Science leading to the B.Sc. degree; one in Engineering (Civil, Electrical or Mining); the other in Architecture.

It is recommended that students who intend to enter the Faculty of Applied Science should, if at all possible, take the Combined Course in Arts and Applied Science; in which case the students cover all the work of the four years' curriculum in Applied Science and in addition secure in the Arts subjects a broader foundation. For the outline of this Combined Course refer to p. 78.

THE B.Sc. DEGREE IN ENGINEERING

The requirements of the first and second years of the three divisions of Engineering groups are uniform, and are designed to give the general foundation in mathematics and physical science necessary to specialization in the various branches of Engineering in the last two years. In this group a course in French or German is also offered, specially adapted to an Applied Science curriculum.

UNIVERSITY OF ALBERTA

Students of this University who may wish to study branches of Engineering in which the equipment for third and fourth year work has not been completed, may finish their course at certain universities of Eastern Canada, where, according to arrangement, they will be admitted **ad eundem statum**.

JUNIOR COURSES—FIRST YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Science & Engineering		..	..	..	..
Mechanical Drawing ..	Draw. 2	..	3	..	3	119
Descriptive Geometry ..	Draw. 4	1	3	1	3	119
English	English 1	3	..	3	..	121
*French or German	F. or G. 41	2	..	2	..	144
Elem. Math. Anal.	Math. 21	6	..	6	..	138
Elementary Mechanics	Math. 22	2	3	2	3	138
Physics	Phys. 3	3	3	3	3	154
Physical Education	Phys. Ed. 1	..	3	..	3	160
Survey School	C. E. 6	..	..	..	..	110

*The language taken in matriculation.

JUNIOR COURSES—SECOND YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Chemistry	Chem. 1	3	3	3	3	105
Applied Mechanics	C. E. 1	..	..	3	..	109
Mapping	C. E. 2	..	3	..	..	109
Materials of Const.	C. E. 3	2	..	2	..	109
Mechanical Drawing	Draw. 5	..	3	..	3	119
*French or German	F. or G. 42	2	..	2	..	145
Geology	Geol. 32	2	..	..	3	127
Calculus & Mechanics	Math. 25 & 26	6	..	6	..	138
Physics	Phys. 6	3	3	3	3	154
Physical Education	Phys. Ed. 2	3	..	3	..	161
Survey School	C. E. 7	..	..	..	..	110

*The language taken in the first year.

CIVIL ENGINEERING

A—CIVIL ENGINEERING*

SENIOR COURSES—THIRD YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Hydraulics	C. E. 55	..	..	3	3	110
App. Thermodynamics	C. E. 57	2	..	2	3	111
Structural Design	C. E. 62	1	..	1	3	111
Applied Mechanics	C. E. 67	3	3	2	..	112
Applied Electricity	E. E. 53	2	3	2	..	120
Geology	Geol. 52	3	3	..	..	127
Astronomy ..	Math. 53	3	..	3	..	139
Graphical & Numerical Methods	Math. 63	..	..	2	3	139
Economics	Pol. Ec. 2	2	..	..	..	157

*Students in Civil Engineering are strongly advised to work in a drafting office during one summer, in order to gain necessary practical experience.

SENIOR COURSES—FOURTH YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Foundations	C. E. 52	1	..	1	..	110
Theory of Structures ..	C. E. 53	3	..	3	..	110
Water Supply & Sew. Disp.	C. E. 59	2	3	2	3	111
Structural Design	C. E. 63	2	3	2	3	112
Testing Lab.	C. E. 66	..	3	..	3	112
Land Transportation ..	C. E. 74	3	..	3	..	112
San. Science	Hyg. 52	1	103
Econ. & Bus. Law	Pol.Ec. 68or69	2	..	158
Optional Subject	

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B—ELECTRICAL ENGINEERING

SENIOR COURSES—THIRD YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
App. Thermodynamics	C. E. 57	2	..	2	3	111
Applied Mechanics	C. E. 67	3	3	2	..	112
Direct Current	E. E. 51 & 52	3	6	3	6	119
Mechanics of Machines	E. E. 55	2	1	2	1	120
Machine Design	E. E. 54	2	..	2	3	120
Mech. Drawing	E. E. 56	..	..	..	3	120
Advanced Calculus	Math. 57	2	..	2	..	139
Electrical Physics	Phys. 53	3	3	3	3	155
Economics	Pol. Ec. 2	2	..	..	..	157

SENIOR COURSES—FOURTH YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Hydraulics	C. E. 55	..	..	3	3	110
Power Dist., Light and Tract.	E. E. 58	2	..	2	..	120
Alternating Currents ..	E. E. 59	3	6	3	6	120
Elec. Applic. & Design	E. E. 60	2	3	2	3	120
Telegraphy and Tele- phony	E. E. 61	2	..	..	..	120
Electro-Chem. & Met.	E. E. 62	2	..	2	..	120
Machine Design	E. E. 63	2	..	..	..	120
San. Science	Hyg. 52	1	..	..	..	103
Econ. & Bus. Law	Pol.Ec. 68or69	..	..	2	..	158

MINING ENGINEERING

C—MINING ENGINEERING

SENIOR COURSES—THIRD YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Inorganic Chemistry	Chem. 55	2	6	2	6	107
Hydraulics	C. E. 55	..	..	3	3	110
App. Thermodynamics	C. E. 57	2	..	2	3	111
App. Mechanics	C. E. 70	2	..	..	..	112
Economics	Pol. Ec. 2	2	..	..	..	157
Petrology	Geol. 52	3	3	3	3	127
Mineralogy	Geol. 54	2	3	1	3	128
Mining Plant	M. E. 52	..	..	2	3	141
Fire Assaying	M. E. 54	1	6	..	..	141
Principles of Mining	M. E. 56	1	..	1	..	141
Mine Survey School	M. E. 57	..	..	..	..	141

(a) Coal Mining Option

SENIOR COURSES—FOURTH YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
*Thermodynamics	C. E. 57	2	..	2	3	111
App. Electricity	E. E. 53	2	3	2	..	120
Stratigraphy	Geol. 55	3	3	..	..	128
Mineral Deposits	Geol. 58	3	..	3	3	128
Sanitary Science	Hyg. 51	..	..	1	..	103
Econ. & Bus. Law	Pol. Ec. 68	2	..	..	..	158
Coal Mining	M. E. 59	2	3	2	3	142
Mining Machinery	M. E. 61	..	..	3	..	142
Ventilation	M. E. 62	..	..	2	..	142
Mine Design	M. E. 64	3	143
Fuel Analysis	M. E. 65	..	6	..	6	143

*Given as C.E. 57, Session 1921-22.

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(b) Metal Mining Option

SENIOR COURSES—FOURTH YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Quantitative Analysis ..	Chem. 56	2	6	2	6	107
App. Electricity	E. E. 53	2	3	2	..	120
Petrography	Geol. 57	..	3	..	..	128
Mineral Deposits	Geol. 58	3	..	3	3	128
Sanitary Science	Hyg. 51	..	..	1	..	103
Econ. & Bus. Law	P. E. 68	2	..	..	..	158
Metallurgy	M. E. 58	2	..	2	3	142
Metal Mining	M. E. 60	2	3	..	..	142
Mining Machinery	M. E. 61	..	..	3	..	142
Ore Dressing and Mill- ing	M. E. 63	2	3	2	..	143
Mine Design	M. E. 64	..	..	..	3	143

NOTE: Students must also take C.E. 57, Session 1921-22.

(c) Mining Geology Option

SENIOR COURSES—FOURTH YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Quantitative Analysis ..	Chem. 56	2	6	2	6	107
Stratigraphy	Geol. 55	3	3	3	3	127
Petrography	Geol. 57	..	3	..	..	128
Mineral Deposits	Geol. 58	3	..	3	3	128
Sanitary Science	Hyg. 51	..	..	1	..	103
Econ. & Bus. Law	Pol. Ec. 68	2	..	..	..	158
Metallurgy	M. E. 58	2	..	2	3	142
Metal Mining	M. E. 60	2	3	..	..	142
Mining Machinery	M. E. 61	..	..	3	..	142
Ore Dressing and Mill- ing	M. E. 63	2	..	2	..	143

NOTE: Students must also take C.E. 57, Session 1921-22.

ARCHITECTURE

THE B.Sc. DEGREE IN ARCHITECTURE

The course of study in Architecture of the first year includes a number of subjects in the Faculty of Arts and Sciences, some from the Engineering course, together with Architectural and Freehand Drawing adapted to the Architectural course. In succeeding years scientific and technical subjects are studied to the extent required in the practice of Architecture. Throughout the course increasing attention is given to Architectural design.

JUNIOR COURSES—FIRST YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Arch. Drawing	Draw. 1	..	6	..	6	119
Freehand Drawing	Draw. 3	..	3	..	3	119
Descriptive Geometry ..	Draw. 4	1	3	1	3	119
English	English 1	3	..	3	..	121
French	French 41	2	..	2	..	144
History	History 1	3	..	3	..	129
Gen. Elem. Math.	Math. 1 & 2	6	..	6	..	137
Physics	Phys. 1	3	3	3	3	153
Physical Education	Phys. Ed. 1	..	3	..	3	161
Survey School	C. E. 6	..	..	..	..	110

JUNIOR COURSES—SECOND YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Arch. Drawing	Arch. 2	..	3	..	3	100
Arch. Design	Arch. 3	..	6	..	9	100
History of Arch.	Arch. 4	2	..	2	..	100
Building Const.	Arch. 5	..	6	..	6	101
Decorative Arts	Arch. 6	..	4	..	4	101
Mapping	C. E. 2	..	3	..	..	109
Classical Philology	Cl. Phil. 51	3	..	3	..	115
French	French 42	2	..	2	..	145
Elem. Math. Anal.	Math. 21	6	..	6	..	137
Physical Education	Phys. Ed. 2	..	3	..	3	161

UNIVERSITY OF ALBERTA

SENIOR COURSES—THIRD YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Arch. Drawing	Arch. 51	..	3	..	3	101
Arch. Design	Arch. 52	1	9	1	9	101
History of Arch.	Arch. 54 or 55	2	..	2	..	101
Decorative Arts	Arch. 56	..	3	..	3	101
Specifications	Arch. 58	1	..	..	..	101
Building Construction ..	Arch. 61	..	6	..	6	101
Mat. of Construction	C. E. 3	2	..	2	..	109
Applied Mechanics	C. E. 71	2	3	2	..	112
Sanitary Science	Hyg. 52	1	..	..	..	103

SENIOR COURSES—FOURTH YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Architectural Design ..	Arch. 52	1	15	1	15	101
History of Arch.	Arch. 55	2	..	2	..	101
Decorative Arts	Arch. 57	1	3	1	3	101
Ventilation & Heating	Arch. 60	1	..	..	..	101
Foundations	C. E. 52	1	..	1	..	110
Structural Design	C. E. 62	1	..	1	3	111
Testing Lab.	C. E. 66	..	3	..	3	112

COMBINED COURSES

I—COMBINED COURSE LEADING TO THE DEGREES OF B.A. AND B.Sc. IN ENGINEERING

First Year: English 1.
History 1.
Mathematics 1.
Physics 1.
French 1 and 3, German 1 and 3, Latin 1 and
3, Greek 1; two of these, one of which
must be a modern language.
Physical Education 1.

COMBINED COURSES

- Second Year:** One course from Division A (see p. 60).
One course from Division B (see p. 60).
One course from Division C (see p. 60).
Mathematics 22 (Mechanics).
Drawing 2 and 4.
Physical Education 2.
- Third Year:** Two courses from Divisions A and B (see p. 60).
Physics 3 (Heat, Light and Sound).
Mathematics 21 (Elementary Mathematical Analysis).
Science and Engineering.
C.E. 6 (Survey School).
The courses of years IV, V, and VI are identical with those of years II, III, and IV in Engineering.
The B.A. degree may be granted at the end of the fourth year.

II—COMBINED COURSE LEADING TO THE DEGREES OF B.A. AND B.Sc. IN ARCHITECTURE

- First Year:** As in Section I, except that French 1 and 3 is obligatory.
- Second Year:** One course from Division A (see p. 60).
One course from Division B (see p. 60).
One course from Division C (see p. 60).
One course from A, B, or C.
Drawing 3 and 4 (Freehand and Descriptive Geometry).
- Third Year:** Two courses from Division A and one from Division B, or two courses from Division B and one course from Division A, B, or C.
Drawing 1 (Arch. Drawing, 3 hours).

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C.E. 6 (Survey School).

The courses of years IV, V, and VI are identical with those of years II, III, and V in Architecture.

The B.A. degree may be granted at the end of the fourth year.

FACULTY OF MEDICINE

Two courses are offered, one leading to the degree of Doctor of Medicine, the other to the degree of Doctor of Dental Surgery.

The new building will be ready for occupation in September.

THE DEGREE OF DOCTOR OF MEDICINE

The course leading to this degree is arranged on the basis of a six-year curriculum, of which the work of the first four years is now offered.

In accordance with the recent decisions of McGill University and the University of Toronto to extend the course for the degree of Doctor of Medicine from five to six years, the University of Alberta by adding another year to the course, commencing with the session 1919-20, readjusted the medical curriculum to correspond with this extension. The "returned soldier" class of 1924 will complete the first three years of the medical course on the basis of the previous five-year curriculum.

Arrangements have been made, by which any student who has completed the first four years of the curriculum for this degree in the University of Alberta, may receive equivalent standing in the medical curriculum of McGill University or in the University of Toronto, and may then proceed to the degree by completing the final two years of the medical course in either of these universities.

The attention of students is called to a Combined Course leading to the degrees of B.A., M.D., details of which are given on p. 84.

MEDICINE

JUNIOR COURSES—FIRST YEAR

(Six-year course)

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Botany	Biol. 1	3	3	*	*	103
Zoology	Zoology 2	2	4	2	4	161
Chemistry	Chem. 2	3	6	3	6	105
Physics	Phys. 11	3	3	3	3	153
French or	French 41 or					144
German	Ger. 41	2	..	2	..	147
Mathematics	Math. 32	2	..	*	..	138
English	Eng. 1	3	..	3	..	121
Physical Education	Phys. Ed. 1	..	3	..	3	161

*Biology 1 and Mathematics 32 continue to the end of January.

JUNIOR COURSES—SECOND YEAR

(Six-year course)

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Gross Anatomy	Anat. 4	2	12	..	..	97
Gross Anatomy	Anat. 2 & 5	..	..	2	10	97
Histology	Anat. 10	3	4	..	..	97
Splanchnology	Anat. 12	..	..	2	4	97
Embryology (Human)	Anat. 14	..	..	1	3	98
Embryology	Zoology 3	2	4	..	..	161
Organic Chemistry	Chem. 3	3	..	3	3	106
Bacteriology	Bact. 1	1	3	102
Materia Medica	Mat. Med. 3	1	..	1	..	136
Physical Education	Phys. Ed. 2	..	3	..	3	161

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SENIOR COURSES—THIRD YEAR (Five-year course)

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Gross Anatomy	Anat. 53 & 54	2	4	2	5	98
Neurology	Anat. 60	2	6	..	..	98
Bacteriology	Bact. 51	1	2	1	2	103
Biochemistry	Biochem. 51	1	2	1	2	156
Pharmacology	Pharm. 51	1	2	1	2	150
Pharmacy	Pharm. 3	..	..	1	..	149
Physiology	Physiol. 51	3	3	3	3	156
Pathology	Pathology 51	3	..	1	4	149
Clinical Medicine	Clin. Med. 51	..	4	..	4	116
Surgery	Surgery 51	1	2	1	2	160
Psychology	Psych. 53	1	..	1	..	152
Clinical Laboratory	Clin. Lab. 52	..	..	..	4	116

SENIOR COURSES—THIRD YEAR (Six-year course)

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Gross Anatomy	Anat. 53 & 54	2	8	2	5	98
Neurology	Anat. 60	2	6	..	..	98
Bacteriology	Bact. 51	1	2	1	2	103
Biochemistry	Biochem. 1	3	4	3	4	156
Pharmacy	Pharm. 3	..	..	1	..	149
Physiology	Physiol. 1	3	3	3	3	155
Psychology	Psychol. 53	1	..	1	..	152

The subjects for fourth year of the six-year course will be issued when the details are completed.

THE DEGREE OF DOCTOR OF DENTAL SURGERY

The course leading to this degree is arranged on the basis of a four-year curriculum of which the work of the first two years is offered.

Undergraduates who have completed the first and second years of the course in Dentistry in this University will be admitted to the third year in Dentistry at McGill University.

DENTISTRY

Undergraduates who intend to finish their course at the Royal College of Dental Surgeons of Ontario must have Senior Matriculation on entrance, or must take the first year in Arts before proceeding to their professional studies.

Senior Matriculation or a pre-Dental year will be required by this University in Dentistry in the session 1922-23.

JUNIOR COURSES—FIRST YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Anatomy	Anat. 7	..	..	1	2	98
Anatomy	Anat. 6	1	5	1	2	98
Botany	Biology 1	3	3	*	*	103
Zoology	Zoology 2	2	4	*	*	161
Chemistry	Chem. 1	3	3	3	3	105
Physics	Phys 21	3	3	3	3	153
Prosthetic Dentistry	Dent. 1	1	5	1	5	117
Physical Education	Phys. Ed. 1	..	3	..	3	161

*Botany and Zoology continued till the end of January.

JUNIOR COURSES—SECOND YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Anatomy	Anat. 23	1	2	2	4	99
Anatomy	Anat. 21	1	6	..	..	99
Histology	Anat. 11	3	4	..	..	99
Splanchnology & Embryology	Anat. 13 & 15	..	..	1	3	99
Materia Medica and Pharmacy	Mat. Med. 4	1	2	1	2	136
Physiology	Physiol. 1	3	3	3	3	155
Organic Chemistry	Chem. 3	3	..	3	3	106
Prosthetic Dentistry	Dent. 3	1	2	3	3	118
Operative Dentistry	Dent. 2	1	2	1	5	118
Physical Education	Phys. Ed. 2	..	3	..	3	161

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THE COMBINED COURSE LEADING TO THE DEGREES
OF B.A. AND M.D.

- First Year:**
1. English 1.
 2. History 1.
 3. Mathematics 1.
 4. Physics 11.
 5. and 6. French, *German, Latin, Greek:
two to be taken of which one must be
a modern language.
 7. Physical Education 1.

- Second Year:**
1. An option in Group A.
 2. An option in Group B. (Phil. 1 or 2 recommended).
 3. Zoology 1.
 4. Chemistry 1.
 5. Biology 1.
 6. Physical Education 2.

- Third Year:**
1. Chemistry 51 or 58.
 2. Chemistry 52.
 3. and 4. Two senior courses from Group A
or B, or one senior course from Group A
and one from Group B.

- Fourth Year:** The subjects of Second Year Medicine.
The subjects of years V, VI, VII, and VIII,
are identical with those of years IV, V, and
VI, in Medicine.
The B.A. degree may be granted at the end
of the fourth year.

*Students in the combined course in Arts and Medicine, who have not matriculated in German, are required to include German A in their work of the first year.

LAW

FACULTY OF LAW

Undergraduate Degrees in Course

THE LL.B. DEGREE

In the Faculty of Law courses are offered leading to the degree of LL.B.

The course of study leading to the degree covers a period of four years. It is arranged to meet the requirements of the Alberta Law Society for students-at-law, providing along with these requirements such additional courses as are necessary to obtain the degree.

A Combined Course is also offered leading to the degrees of B.A., LL.B.

A special bulletin giving details of courses can be obtained on application to the Registrar.

COMBINED COURSE LEADING TO THE DEGREES OF B.A. AND LL.B.

- First Year:**
1. English 1.
 2. History 1.
 3. Mathematics 1.
 4. Physics 1.
 5. 6. Any two of the following:
 French 1 and 3,
 German 1 and 3.
 Greek 1.
 Latin 1 and 3.
 7. Physical Education 1.

- Second Year:**
1. English 2.
 2. History 2 or 3.
 3. Political Economy 1.
 4. One course from Division C.
 5. One option.
 6. Physical Education 2.

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- Third Year:**
1. History 58.
 2. Political Economy.
 3. Two Senior Courses from Divisions A and B.
 4. One option.
- Fourth Year:**
1. History 57, together with
 2. Subjects of First Year Law (as required by the Law Society of Alberta).
- Fifth Year:**
1. Subjects of Second Year Law (as required by the Law Society of Alberta), together with
 2. Constitutional Law (Dicey & Tarring).
 3. Jurisprudence (Salmond).
- Sixth Year:**
1. Subjects of Third Year Law (as required by the Law Society of Alberta), together with
 2. Public International Law (Hall).
 3. History of English Law (Holdsworth, vol. 1).
 4. Roman Law (Walton).
 5. American Constitutional Law (Hall).
 6. The World's Legal Philosophers, (Berolzheimer, the Modern Legal Philos. Series vol. II, Boston Bk. Co.).
 7. Ancient Law (Maine).

FACULTY OF AGRICULTURE

In the Faculty of Agriculture courses are offered leading to the degree of B.S.A., and of B.H.Ec. For the B.S.A. degree a three-year course is offered for students who have completed the two-year course in one of the Provincial Schools of Agriculture, or who have equivalent credits from other agricultural institutions.

Students entering on the course with matriculation standing, may enter the University after a course of one year at one of the Provincial Schools of Agriculture.

Students must have had at least ten months of practical work in agriculture before the degree can be granted.

The attention of students is called to a Combined Course leading to the degrees of B.A., B.S.A., details of which are given on Page 89. Students registering for this course must have matriculation standing, and may enter the University without taking the preliminary course at one of the Schools of Agriculture.

AGRICULTURE

THE DEGREE OF B.S.A.

JUNIOR COURSES—FIRST YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Animal Husbandry	A. H. 1	..	4	..	4	99
Botany	Bot. 3	2	3	2	3	104
Chemistry	Chem. 1	3	3	3	3	105
English	Eng. 4	3	..	3	..	121
Field Husbandry	F. H. 1, 2 & 3	2	2	2	2	124
History of Agriculture	H. of A. 1	1	..	1	..	131
Mathematics	Math. 31	3	..	3	..	138
Physics	Phys. 31	3	3	3	3	154
Physical Education	Phys. Ed. 1	..	3	..	3	161

JUNIOR COURSES—SECOND YEAR

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Agric. Engineering	A. E. 2	1	2	1	2	96
Animal Husbandry	A. H. 4	2	2	2	2	99
Bacteriology	Bact. 2	1	3	..	..	103
Chemistry	Chem. 4	3	..	..	3	106
Economics	Pol. Ec. 2	2	..	..	..	157
English	Eng. 3	1	..	1	..	121
Field Husbandry	F. H. 4	2	2	2	2	124
History of Agriculture	H. of A. 2	1	..	1	..	131
Horticulture	Hort. 1	1	2	1	2	132
Soils	Soils 1 & 2	2	4	2	4	159
Veterinary Science	V. Sc. 1	1	..	1	..	160
Physical Education	Phys. Ed. 2	..	3	..	3	161
Elective						
*Animal Husbandry	A. H. 3	1	2	1	2	99
*Botany	Bot. 4	..	..	1	2	104
†*Zoology						

*Any one of these to be taken, but no course will be given for less than two students.

†*Prerequisite to A. H. 53 and may be taken with A.H. 3.

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SENIOR COURSES—THIRD YEAR

Required

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Agric. Engineering	A. E. 51	1	2	1	2	96
Dairying	Dairy. 51	1	2	1	2	117
Economics	Pol. Ec. 70	..	..	2	..	158
English	Eng. 54	1	..	1	..	122
History of Agriculture	H. of A. 51	1	..	1	..	131
Poultry	Poultry 51	1	2	1	2	158

Agricultural Electives

Minimum requirement, 10 hours from the following, of which at least 4 hours must be lectures.

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Agric. Engineering	A. E. 52	1	3	1	3	96
Animal Husbandry	A. H. 52	2	..	2	..	100
Animal Husbandry	A. H. 53	2	..	..	..	100
Animal Husbandry	A. H. 54	..	..	2	2	100
Animal Husbandry	A. H. 55	..	2	..	..	100
Dairying	Dairy. 52	2	..	2	..	117
Field Husbandry	F. H. 51	2	..	2	..	125
Field Husbandry	F. H. 52	..	..	1	2	125
Field Husbandry	F. H. 53	3	..	..	..	126
Field Husbandry	F. H. 54	..	2	..	2	126
Field Husbandry	F. H. 55	..	..	1	..	126
Horticulture	Hort. 51	2	2	2	2	132
Poultry	Poultry 52	2	2	2	2	159
Soils	Soils. 53	2	4	..	..	159
Soils	Soils 54	..	..	2	3	159
Soils	Soils 55	..	..	2	..	159
Veterinary Science	V. Sc. 51	1	..	1	..	160

AGRICULTURE

SENIOR COURSES—THIRD YEAR—Continued

Science Electives

Minimum requirement, 3 hours from the following:

SUBJECT	Course No.	First Lect.	Half Lab.	Sec. Lect.	Half Lab.	Pge.
Bacteriology	Bact. 52	..	..	1	3	103
Botany	Bot. 4	..	..	1	2	104
Chemistry	Chem. 57	3	3	3	3	107
Chemistry	Chem. 58	3	3	3	3	107
Geology	Geol. 51	2	..	..	3	127
Mathematics	Math. 33	3	..	..	..	138
Physics	Phys. 3	3	3	3	3	153
*Survey School	C. E. 6			4 weeks		110
Zoology	Zoology 2	..	..	2	2	161
Zoology	Zoology 3	2	3	..	..	161

*To be taken during second year.

Open Elective

Minimum requirement, 2 hours.

COMBINED COURSE IN ARTS AND AGRICULTURE

First Year: English 1.
 History 1.
 Mathematics 1.
 Physics 1.
 Latin, Greek, French, German: two of these,
 one of which must be a modern language.
 Physical Education 1.

Second Year: One course from Division A.
 One course from Division B.
 Two courses from Division C (Biol. 1 and
 Chem. 1).
 One course from Division A or B.
 Physical Education 2.

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- Third Year:** Two courses from Division A.
One course from Division B.
One course from Division C (Geology).
or
One course from Division A.
Two courses from Division B.
One course from Division C (Geology).
- Fourth Year:** Animal Husbandry 1.
Botany 52.
Chemistry 1.
Field Husbandry 1.
History of Agriculture 1.
Mathematics 62.
Physics (Electricity and Magnetism or Heat,
Light and Sound).
Soils 1.
The degree of B.A. may be granted on successful completion of the four years mentioned above.
- Fifth Year:** Animal Husbandry 3 and 4.
Bacteriology 2.
English 3.
Farm Mechanics 2.
Field Husbandry 2.
History of Agriculture 2.
Horticulture 1.
Political Economy 2.
Soils 2.
Veterinary Science 2.
- Sixth Year:** As for the final year in Agriculture.

THE DEGREE OF B.H.Ec.

For those entering from the Provincial Schools of Agriculture

For entrance requirements, see p. 35.

Junior Courses.

- First Year:** English 1 or 4.
History 1.
Mathematics 31 or 1.
Chemistry 1.
Physics 31 or 1.
Household Economics 31.
Physical Education 1.

PHARMACY

Second Year: One course from Division A or B (see p. 60).
Chemistry 1.
Zoology.
Bacteriology 1 (1st term).
Bacteriology 52 (2nd term).
Household Economics 32.
Physical Education 2.

Senior Courses.

Third Year: One course from Division A or B (see p. 60).
Biochemistry.
Food Chemistry.
Hygiene and Sanitation.
Household Economics 56, 57, 58, 59.

SCHOOL OF PHARMACY

The University offers two courses in Pharmacy, one covering the requirements for registration as Licentiate of the Alberta Pharmaceutical Association, the other leading to the degree of B.Sc. The former covers two years and the latter four years of academic work.

The Licentiate course as outlined below is a minimum pre-requisite to acquiring membership in the Alberta Pharmaceutical Association. The first year of this course may be taken by matriculants at any time, but application for registration in the second year will not be accepted until at least one-half of the apprenticeship term prescribed by the Association has been completed by the candidate.

In lieu of the required apprenticeship service, candidates for registration as members of the Association who hold the B.Sc. degree in Pharmacy may offer one year's practical experience in the employ of a duly qualified pharmacist, provided that such service has been performed after the completion of the second year of the said course.

A special bulletin of the School of Pharmacy may be obtained on application to the Registrar of the University.

UNIVERSITY OF ALBERTA

I—THE LICENTIATE COURSE

FIRST YEAR

SUBJECT	Course No.	Lect. Hours	Lab. Hours	Pge.
Botany	Biol. 3	2	3	104
Chemistry	Chem. 2	3	6	105
Chemistry	Chem. 3	3	3*	106
Latin	Lat. 36	1	..	113
Mathematics	Math. 36	1	..	138
Physics	Phys. 21	3	3	153
Physical Education	Phys. Ed. 2	3	..	161

*Second half session.

SECOND YEAR

SUBJECT	Course No.	Lect. Hours	Lab. Hours	Pge.
Materia Medica	M. M. 1	4	..	135
Pharmacy	Pharm. 1,2&4	4	6	149
Physiology				
(Biochemistry)	Biochem. 1	3	3	156
Toxicology	Biochem. 1	1*	..	160
Physical Education	Phys. Ed. 2	3	..	161

*First half session.

II—THE B.Sc. DEGREE IN PHARMACY

For the outline of the course leading to this degree see the Faculty of Arts and Sciences, p. 70.

DEGREES WITH DISTINCTION

First Class Standing

First Class Standing is awarded to those students in Applied Science and in the general course in Arts who have obtained in the required senior courses an average of eighty-five per cent. or over.

GRADUATE DEGREES

GRADUATE AND AD EUNDEM DEGREES

The M.A. and M.Sc. Degrees

Candidates for higher degrees shall be under the supervision of the Committee on Graduate Studies.

1. A candidate for the Degree of Master of Arts or Master of Science, this degree to be sequent to the Bachelor's degree already held, must have a Bachelor's degree from this University or be admitted *ad eundem gradum*, and before presenting himself for the higher degree must have held the Bachelor's degree for at least one academic year.

2. A candidate must proceed to the Master's degree by

- (a) **the pursuit of a prescribed course of study.** This course of study shall consist of, or be equivalent to, a full year of advanced work, and must form a cohesive whole with a definite aim. In connection with the courses prescribed a thesis will be required on a subject approved by the Committee, or
- (b) **the carrying out of an investigation.** A candidate who elects to carry out a piece of original investigation shall submit on or before April 1st of the year in which the degree is to be taken, a formal report embodying the results of the investigation, or submit a dissertation indicative of acquaintance with the methods of research, which shall be printed or typewritten, and which shall be deposited in the University Library. During the period of the student's candidacy, no use of the material or results of the investigation shall be made without the formal sanction of the Committee on Graduate Studies. In all cases the subject of the investigation must receive the written approval of the head of the department concerned before it is submitted to the Committee on Graduate Studies as required in Section 3, and the report when completed shall be accepted only on the recommendation in writing of the department concerned. Every candidate will be required, in addition, to pass an examination, written or

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oral, on the subject within which his investigation lies. Such examination shall be conducted under the supervision of the Committee on Graduate Studies.

3. A candidate who elects to proceed to the degree by method (a) must submit the course of study which he proposes to follow to the Committee on Graduate Studies and receive its approval on or before the first day of November of the year in which he undertakes his work for the degree; or
- (b) must submit the subject of the investigation he proposes to carry out, to the Committee on Graduate Studies, and receive its approval on or before the first day of November preceding the spring in which the degree is to be taken. Candidates are strongly recommended, however, to submit their applications to the Committee at the close of the preceding session. This is especially advisable for students wishing to work in scientific departments.

4. In respect of courses taken with a view to the fulfilment of the requirements for the Master's degree, the pass mark shall be 65 per cent., and no supplemental examinations shall be permitted.

The B.D. Degree

By an arrangement with the affiliated colleges, the degree of B.D. is offered by the University to graduates in the Faculty of Arts and Sciences who follow a course of study presented by the affiliated colleges and approved by the University Senate. For information regarding this course application may be made to the Registrar.

Ad Eundem Degrees

Applications for **ad eundem degrees**, accompanied by diplomas and a calendar of the institution conferring the degree, should be made to the Registrar.

Details of Courses by Departments

The University reserves the right to modify or withdraw for the Session any of the Courses here outlined.

DEPARTMENT OF ACCOUNTANCY

Mr. Race, and special sessional Lecturers for evening classes.

Junior Courses.

1. **Principles of Accounting.** 3 hrs.
The subject is approached from the point of view of management and control, and leads from reports, statements and balance sheets to the details of compilation, including the keeping of the more usual accounts and records.
For second year students in Commerce.

10. **Accounting.** Evening classes.
Theory and Practice for Intermediate candidates, Institute of Chartered Accountants of Alberta.

Senior Courses.

52. **Accounting.** 3 hrs.
For third year students in Commerce. (Not offered 1921-22.)
53. **Accounting.** 3 hrs.
For fourth year students in Commerce. (Not offered 1921-22.)
60. **Accounting.** Evening Classes.
Advanced course for Final candidates, Institute of Chartered Accountants of Alberta.

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DEPARTMENT OF AGRICULTURAL ENGINEERING

Professor Smith.

Junior Courses.

2. **Agricultural Engineering.** 1 hr lect., 2 hrs lab.

A practical study of all lines of tillage, seeding, fertilizing, harvesting and threshing machinery. Draft of plows and other implements. Belt lacing, rope work, pipe fitting, babbitting and soldering. In the laboratory an effort will be made to furnish students with all the different types of machines with which they must deal on the average Alberta farm. An opportunity will be given to study the machines with the aid of a laboratory manual. Each student will require a laboratory manual.

Text-books: *Equipment for the farm and farmstead*, Ramsower; *The Tractor Field Book*.

Senior Courses.

51. **Agricultural Engineering.** 1 hr lect., 2 hrs lab.

Strength of materials and materials of construction. Concrete work. A brief study of the application of heating, ventilation, lighting, water supply and sewage disposal problems to agriculture. The planning of farm buildings and farmsteads. Each student will be allowed to choose the type of building he wishes to design, and also to make the farmstead layout apply to his own requirements.

References will be assigned during the course.

Note: This course will not be given during the session of 1921-22, but in its place a combined course in Farm Machinery and Farm Motors will be given to the third year students who completed the course in Agricultural Engineering in their second year.

52. **Agricultural Engineering.** 1hr lect., 3 hrs lab.

The demand for labor saving machinery has turned the attention of farmers to power equipment of various kinds. The object of the course is to acquaint students with the fundamental principles of the internal

ANATOMY

combustion engine, namely, valve timing, carburetion, lubrication, ignition and sufficient practice in operation to enable students to locate and correct the most common troubles. The practical work will be given along lines similar to the work in the Farm Machinery course. Each student will require a laboratory manual.

Text-book: *The Tractor Field Book*.

DEPARTMENT OF ANATOMY

Professor Revell, Assistant Professor, and the following Demonstrators for 1921-22: Drs. Adamson, J. A.

McPherson, Follinsbee, Greene, Hurlburt, Macbeth,

Geggie, F. S. Macpherson, Hepburn, Munroe,

Washburn, Bulyea, and Strong.

4. Gross Anatomy of the Body-Wall and Thorax.

2 hrs lect., 12 hrs lab. first half.

This is the first course in Gross Anatomy and includes the osteology of the parts studied.

Text-books: *Text-book of Anatomy*, Cunningham, Gray (American edition by Lewis), Morris (American edition by Jackson), Piersol, or Quain; *Manual of Practical Anatomy*, Cunningham; *BNA Terminology*, Barker or Eycleshymer; *Dictionary*, Gould, Stedman, or Dorland; *Atlas* (for reference only) Toldt, Sobotta and McMurrich, Spalteholtz.

5. Gross Anatomy of the Abdomen and Pelvis.

2 hrs lect., 10 hrs lab. sec. half.

Preceding Anatomy 2.

Text-books as for Anatomy 4.

2. Gross Anatomy of the Extremities.

2 hrs lect., 10 hrs lab. sec. half.

Text-books as for Anatomy 4.

10. Histology. 3 hrs lect., 4 hrs lab. first half.

The cell, the elementary tissues.

Text-books: *Histology*, Bailey, Jordan, Stohr (Lewis), Schaffer, or Quain (Vol. II, Pt. 1).

12. Splanchnology. 2 hrs lect., 4 hrs lab. sec. half.

The minute anatomy of the organs of the body.

Text-books as for Anatomy 10.

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14. **Embryology.** 1 hr lect., 3 hrs lab. sec. half.
Mammalian embryology.
Text-books: *Introduction to Vertebrate Embryology*, Reese;
Text-book of Embryology, Prentiss; *Development of the Human Body*, McMurrich.

Senior Courses.

53. **Gross Anatomy of the Head and Neck.**
1 hr lect., 6 hrs lab. first half.
1 hr lect., 4 hrs lab. sec. half.
Text-books as for Anatomy 4.
54. **Applied Anatomy.** . . 1 hr lect., 2 hrs lab. first half.
1 hr lect., 1 hr lab. sec. half.
A review of the work of the second year supplemented by the study of frozen sections, and having regard to medical and surgical application.
Text-books as for Anatomy 1; *A Manual of Surgical Anatomy*, Whittaker; and *A Cross Section Anatomy*, Eycleshymer and Shoemaker.
56. **Advanced Anatomy.** Hours to be arranged.
Open to students who have completed the required work.
60. **Neurology.** 2 hrs lect., 6 hrs lab. first half.
Gross and minute structures of the central nervous system and organs of the special senses; preliminary to physiology of nervous system.
Text-books as for Anatomy 4 and *Introduction to Neurology*, Herrick; *Laboratory Outline for Neurology*, Herrick and Crosby.

For Dental Students—First Year.

6. **Odontology.** 1 hr lect., 5 hrs lab., first half.
1 hr lect., 2 hrs lab. sec. half.
Morphology of human teeth, occlusion and arrangement, deciduous teeth, comparative odontology.
Text-books: *Dental Anatomy*, Black.
7. **Osteology.** 1 hr lect., 2 hrs lab. sec. half.
Text-book: *BNA Terminology*, Barker.

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Second Year.

11. **Histology.** 3 hrs lect., 4 hrs lab. first half.
A briefer course than Anatomy 10.
Text-books as for Anatomy 10.
13. **Splanchnology.** 1 hr lect., 3 hrs lab. sec. half.
A shorter course than Anatomy 12, but giving more attention to oral structures.
Text-books as for Anatomy 10.
15. **Embryology.** 1 hr lect., 3 hrs lab. sec. half.
Combining with Anatomy 13.
A shorter course than Anatomy 14, devoting more attention to the development of the oral structures.
21. **Gross Anatomy of the Thorax and Abdomen.**
1 hr lect., 6 hrs lab. first half.
Text-books as for Anatomy 4.
23. **Gross Anatomy of the Head and Neck.**
1 hr lect., 2 hrs lab. first half.
2 hrs lect., 4 hrs lab. sec. half.
Text-books as for Anatomy 4, and *Block Anaesthesia and Allied Subjects*, Smith.

DEPARTMENT OF ANIMAL HUSBANDRY

Professor Dowell and Assistant Professor Lattimer.

Junior Courses.

1. **Animal Husbandry.** 4 hrs lab.
Judging types and market classes of live stock.
Text-book: *Types and Market Classes of Live Stock*, Vaughan.
3. **Animal Husbandry.** 1 hr lect., 2 hrs lab.
(a) Origin, history, and development of the different breeds of live stock.
(b) Judging breed types.
4. **Animal Husbandry.** 2 hrs lect., 2 hrs lab.
Similar to Course 51. For those taking the Three Year Course.
Text-book: *Feeds and Feeding*, Henry and Morrison.

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Senior Courses.

51. **Animal Husbandry.** 2 hrs lect., 2 hrs lab.
(a) Feed and management of live stock.
(b) Fitting stock for show or sale.
Text-book: *Feeds and Feeding*, Henry and Morrison.
52. **Animal Husbandry.** 2 hrs lect.
Market production of beef, pork, milk, mutton, and wool. Feeding and marketing horses.
53. **Animal Husbandry.** 2 hrs lect. first half.
Animal breeding.
54. **Animal Husbandry.** 2 hrs lect., 2 hrs lab. sec. half.
Herd book study.
55. **Animal Husbandry.** 2 hrs lab. first half.
Advanced judging.

DEPARTMENT OF ARCHITECTURE

Professor Burgess.

Junior Courses.

2. **Architectural Drawing.** 3 hrs lab.
Applied to historical examples.
Text-book: Pierre Esquié, *Cinq Ordres d'Architecture*.
3. **Architectural Design.** 6 hrs first half, 9 hrs sec. half.
The application of traditional forms to simple problems; subjects involving the use of the Classical Orders and of typical methods of construction.
4. **History of Architecture.** 2 hrs.
Ancient architecture. General review of Egyptian and Assyrian architecture and detailed study of Greek, Roman and Byzantine architecture.
Text-book: Anderson & Spiers, *Greek and Roman Architecture*.

ARCHITECTURE

- 5. Building Construction.** 6 hrs lab.
Methods of employing, assembling, and framing materials in accordance with their various characteristics and the purposes for which each is suited. The principal elements of modern building work, such as, walls, floors, roofs, doors, windows, etc., treated from the point of view of practicable and customary construction. Standard methods of construction.
Text-book: Mitchell's *Building Construction, Junior Course*.
- 6. Decorative Arts.** 4 hrs lab.
Study of decorative principles as applied to the various materials employed in building.

Senior Courses.

- 51. Architectural Drawing.** 3 hrs lab.
Rendering in line and wash; development in light and shade; perspective drawing.
- 52. Architectural Design.** 1 hr lect., 9 hrs lab.
Problems in planning and in the composition of elevations.
- 53. Architectural Design.** 1 hr lect., 15 hrs lab.
Planning and grouping of buildings and surroundings.
- 54. History of Architecture.** 2 hrs.
Mediaeval architecture. Romanesque and Gothic architecture throughout Europe. The Perpendicular and Tudor styles in England. Study of the principles of stone construction in arches and vaults.
Text-book: G. H. West, *Gothic Architecture in England and France*.
- 55. History of Architecture.** 2 hrs.
Renaissance and modern. The effects of the Renaissance movement as illustrated by architecture. The various characters exhibited by Renaissance architecture throughout Europe at various periods. The relation of modern architecture to past styles.
Text-books: W. J. Anderson, *Renaissance Architecture in Italy*; W. H. Ward, *Renaissance Architecture in France*; R. Bloomfield, *English Renaissance Architecture*.

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- 56. Decorative Arts.** 3 hrs lab.
Decoration as employed in minor materials used in architecture, metal, plaster, terra cotta, etc.
- 57. Decorative Arts.** 1 hr lect., 3 hrs lab.
An advanced course in decorative design.
- 58. Specifications.** 1 hr first half.
The preparation of detailed description of architectural works with a view to entering upon and carrying out contracts.
- 60. Ventilation and Heating.** 1 hr first half.
The scientific bases on which the circulation and warming of air in buildings must be provided for. The principle means taken to meet these requirements.
Text-book: R. G. Carpenter, *Heating and Ventilating Buildings*.
- 61. Building Construction.** 6 hrs lab.
Advanced stage of Building Construction Architecture 5, including the more essentially modern methods of construction: re-inforced concrete, etc.
Text-book: Mitchell's *Building Construction, Advanced Course*.
- 62. History of Architecture.** 3 hrs.
For students in Arts.
Text-book: A. D. F. Hamlin, *History of Architecture*.

DEPARTMENT OF BACTERIOLOGY AND HYGIENE

Professor Rankin, Dr. Ower, Dr. Laidlaw and Dr. Orr.

Bacteriology.

Junior Courses.

- 1. Elementary Bacteriology.** 1 hr lect., 3 hrs lab. first half.
Demonstrations in elementary bacteriology. Practical laboratory exercises, i.e., making of media, staining, etc.

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2. Agricultural Bacteriology.

1 hr lect., 3 hrs lab. first half.
Demonstrations and lectures, elementary in character.
Practical laboratory exercises in elementary bacteriology.

Senior Courses.

51. Pathogenic Bacteriology.

1 hr lect., 2 hrs lab.

The relation of bacteria and the higher parasites to disease. Cultivation of pathogenic microorganisms; isolation and identification of bacteria pathogenic to man, etc.

52. Agricultural Bacteriology.

1 hr lect., 3 hrs lab. sec. half.

Plant diseases; study of specific microorganisms; soil bacteriology; dairy bacteriology.

Hygiene

Senior Courses.

51. Elementary Hygiene.

1 hr first half.

The principles of sanitary science.

52. Hygiene and Sanitation.

1 hr sec. half.

Points to be observed in design and construction of buildings to secure the best conditions of health. For Architectural students.

DEPARTMENT OF BIOLOGY

Professor Lewis, Miss Rivett, and

1. General Elementary Biology.

3 hrs lect., 3 hrs lab.

Morphology, physiology of the cell; elements of vegetable morphology, anatomy and physiology, Mendelism, genetics.

Prerequisites: Physics 1, Chemistry 1.

2. General Elementary Biology (Medicine and Dentistry).

3 hrs lect., 3 hrs lab. first half.

Similar to Biology 1.

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3. **General Elementary Botany** (Agriculture and Pharmacy). 2 hrs lect., 3 hrs lab.
Elements of vegetable morphology, anatomy and physiology, classification of flowering plants.
4. **Agricultural Botany** (2nd year Agriculture). 1 hr lect., 2 hrs lab. sec. half.
General vegetable physiology, diseases of plants, Mendelism and genetics.
Prerequisite: Botany 3.

Senior Courses.

51. Anatomy and morphology of the principal groups of plants, palaeobotany; general principles of classification, genetics, evolution.
Prerequisites: Chemistry 51, Geology Elementary.
52. The factors affecting plant growth and distribution; plant formations and associations, representative plant associations of the north temperate belt and arctic regions and their relation to soil and climate.
Prerequisites: Chemistry 52, Geology 52.

Honours Courses.

101. **Palaeobotany.** 3 hrs lect., 6 hrs lab.
Evolution of modern groups of plants as illustrated by the structure of fossil types from various geological horizons, plant remains in peat, lignite, and coal.
Prerequisites: Biology 1, Botany 51 and 52, Geology 51 and 52.
102. **Comparative Anatomy and Ecology.** 3 hrs lect., 6 hrs lab.
Evolution of chief tissues and organs of plants treated from a comparative point of view.
Prerequisites: Biology 1, Botany 51 and 52, Chemistry 52, Bio-chemistry.
103. **Comparative Distribution of Vegetation and Ecology.** 3 hrs lect., 6 hrs lab.
Distribution of vegetation in time and space considered

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from a dynamical point of view. Antecology and synecology.

Prerequisites: Chemistry 52 and 54, Geology 52, Bio-chemistry.

Graduate Courses.

Graduate students who have had the necessary training and wish to carry on research in some field of Botany should consult the head of the department.

DEPARTMENT OF CHEMISTRY

Professor Lehmann, Associate Professor, Assistant Professor Walker, Miss Leavell, Mr. Stover, Mr. Good, Mr. Gardiner, Mr. Reid, and Mr. Mair.

Junior Courses.

1. General Chemistry. 3 hrs lect., 3 hrs lab.

Lectures: Common non-metals and some of the metals and their compounds; fundamental laws and theories, and some historic touches. The course includes a review from the beginning of the subject.

Laboratory: The setting up of apparatus; titrations, and standardization of normal solutions; preparation and separation of a few substances as an introduction to quantitative analysis, and to illustrate some of the laws of chemistry; an introduction to qualitative analysis.

Text-books: Smith, *Chemistry for Colleges* (The Century Company) or McPherson and Henderson, *A Course in General Chemistry* (Ginn); Kenrick and DeLury (Macmillan); W. A. Noyes, *Qualitative Analysis* (Henry Holt).

2. General Chemistry. 3 hrs lect., 6 hrs lab.

Lectures similar to Chemistry 1.

Laboratory: The quantitative determination of nitrogen, sugar, and a number of acids and bases, together with the laboratory work of Chemistry 1. For students in Medicine, Pharmacy, and Dentistry.

Text-books as in Chemistry 1.

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3. **Organic Chemistry.** 3 hrs lect. first half.
3 hrs lect., 3 hrs lab. sec. half.

Lectures: An introduction to both the paraffin and the benzene series.

Laboratory: The preparation of some organic substances. For students in Medicine, Pharmacy, and Dentistry.

Text-books: Remsen, *Organic Chemistry* (Heath and Company); Garrett and Harden, *Practical Organic Chemistry* (Longmans).

4. **Organic Chemistry.** 3 hrs lect. first half, 3 hrs lab. sec. half.

Lectures: Similar to Chemistry 3.

Laboratory: Quantitative chemical analysis of some inorganic acids and bases.

For students in Agriculture.

Text-books: Remsen, *Organic Chemistry* (Heath and Company); Lincoln and Walton.

Senior Courses.

51. **Inorganic Chemistry.** 3 hrs lect., 3 hrs lab.

Lectures: Continuation of Chemistry 1 with special emphasis on metals; introduction to Physical Chemistry.

Laboratory: Qualitative analysis of inorganic bases and acids.

Text-books: Mellor, *Modern Inorganic Chemistry* (Longmans), or Holleman, *Inorganic Chemistry* (Chapman and Hall or Wiley); Jones, *Introduction to Physical Chemistry* (Macmillan); W. A. Noyes, *Qualitative Analysis*.

52. **Organic Chemistry.** 3 hrs lect., 3 hrs lab.

Lectures: Similar to those of Chemistry 3.

Laboratory: Preparation of organic substances.

Text-books: Remsen, *Organic Chemistry* (Heath and Company); Garrett and Harden, *Practical Organic Chemistry* (Longmans).

53. **Agricultural Chemistry.** 3 hrs lect., 3 hrs lab.

Lectures: A general course including soils and fertilizers, fodders and feeding.

Laboratory: Quantitative determination of some acids and bases; simple methods of fodder analysis. For students in Arts and Sciences.

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- 54. Physical Chemistry.** 3 hrs lect., 3 hrs lab.
Lectures: Stoichiometry; atomic theory; periodic system; gas laws; properties of liquids and solids; solutions; chemical dynamics and equilibrium; thermochemistry; electro-chemistry.
Laboratory: Molecular weights; calorimetric determinations; conductivity; concentration cells, etc., to illustrate the lecture course.
Text-books: Jones, *Introduction to Physical Chemistry* (Macmillan); Roth, *Exercises in Physical Chemistry* (Constable).
- 55. Inorganic Chemistry.** 2 hrs lect., 6 hrs lab.
Lectures: Continuation of Chemistry I, most important metals, and their compounds; principles of analytical chemistry.
Laboratory: Qualitative analysis of inorganic bases and acids; quantitative determination of inorganic bases and acids in simple mixtures or solution.
For students in Mining Engineering.
Text-books: Smith, *Chemistry for Colleges* (The Century Co.) or McPherson and Henderson, *A Course in General Chemistry* (Ginn); W. A. Noyes, *Qualitative Analysis* (Holt); Foulk, *Notes on Quantitative Chemical Analysis* (McGraw-Hill Book Co.).
- 56. Analytical Chemistry.** 2 hrs lect., 6 hrs lab.
Lectures: Continuation of Chemistry 55; methods of analysis of ores, minerals and clays.
Laboratory: Analysis of selected ores, minerals and clays.
For students in Mining Engineering.
Text-books: Scott, *Standard Methods of Chemical Analysis* (Von Nostrand).
- 57. Agricultural Chemistry.** 3 hrs lect., 3 hrs lab.
Lectures: Digestibility, assimilation, and function of nutrients; composition of fodders and expression of their nutritive value.
Laboratory: Analysis of fodders.
For students in Agriculture.
Text-books: Kellner, *Scientific Feeding of Animals* (Macmillan); Lincoln and Walton, *Elementary Quantitative Analysis* (Macmillan).

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- 58. Analytical Chemistry.** 3 hrs lect., 3 hrs lab.
Lectures: Continuation of Chemistry 1; principles and methods of quantitative chemical analysis; gravimetric, volumetric, colorimetric; standardization of apparatus; sampling.
Laboratory: Work illustrating the lectures.
Text-books: Ostwald, *Foundations of Analytical Chemistry* (Macmillan); Foulk, *Notes on Quantitative Chemical Analysis* (McGraw-Hill); Treadwell & Hall, *Vol. 2, Quantitative Analysis* (Wiley & Sons).

Honours Courses.

- 101. Organic Chemistry.** 3 hrs lect., 6 hrs lab.
Lectures: Paraffin series, including unsaturated compounds; polymethylenes and purine derivatives; reading of assigned subjects.
Laboratory: Organic preparations.
Text-books: Holleman, *Organic Chemistry* (Chapman and Hall or John Wiley); Garrett and Harden, *Practical Organic Chemistry* (Longmans).
- 102. Organic Chemistry.**
Lectures: The benzene series; naphthenes; terpenes; hetero-cyclic and conjugated cyclic compounds; history of chemistry; reading of assigned subjects.
Laboratory: Organic chemical analysis; molecular weight determinations; determination of the constitution of organic compounds.
Text-books: Holleman, *Organic Chemistry* (Chapman and Hall or Wiley).
- 103. Physical Chemistry.** 3 hrs lect., 3 hrs lab.
Lectures: Covering the same topics as in Chemistry 54, but with more advanced treatment, and with greater emphasis on mathematical relations.
Laboratory: Practical measurements to illustrate the lecture course.
Text-books: Jones, *Introduction to Physical Chemistry* (Macmillan); Roth, *Exercises in Physical Chemistry* (Constable).
- 104. Physical Chemistry.** 3 hrs lect., 6 hrs lab.
Lectures: Chemistry of colloids; classification; preparation; properties; precipitations; suspensoids and emulsoids; surface phenomena; applications; advanced

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electro-chemistry; electro-chemical theory; ionic migration; conductivity; dilution law; Nernst theory; E.M.F. and calculations; concentration cells; special types of cells; single potential; electrolysis; theory of storage battery.

Laboratory: Practical experiments; preparations; and measurements to illustrate the lecture course.

Text-books: Lehfeldt, *Electro-Chemistry*, Pt. 1 (Longmans); Hatschek, *Introduction to the Physics and Chemistry of Colloids*, or Taylor, *Chemistry of Colloids*.

DEPARTMENT OF CIVIL AND MUNICIPAL ENGINEERING

Professor Wilson, Professor Robb, Associate Professor Morrison, and Mr. Fife.

Junior Courses.

1. **Applied Mechanics.** 3 hrs lect. sec. half.
Composition and resolution of forces; bending moments; shears and reactions; funicular polygon; stresses in simple framed structures; centre of gravity; moments of inertia; applications of funicular polygon to arches and hanging chains.
2. **Mapping.** 3 hrs lab. first half.
Topographical and conventional signs; contour maps and problems; plotting from notes; mine survey notes; problems on areas by latitudes and departures; division into triangles and planimeter; construction of small scale maps by polyconic or simple conic projection.
3. **Materials of Construction.** 2 hrs lect.
General characteristics, manufacture and use of woods, metals and their ores, cast iron and malleable cast iron, wrought iron, steels, (corrosion of iron and steel), other metals and alloys, limes and plasters, cements, mortars, concrete, clay products, glass, building stones, masonry construction, oils and paints, asphalts, bitumens, etc., explosives.

Text-book: Johnson, *Materials of Construction* (Wiley).

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- 6. Survey School.** 4 weeks at end of sec. half.
Fieldwork, including chaining, rodding, levelling, transit work, plane table survey; plotting of field notes. Daily lectures on surveying methods; construction, adjustments and use of instruments; topography; contour surveying; mine surveying; descriptions for deeds; railway alignment problems; land system of the Dominion; photographic surveying.
Text-Book: Breed and Hosmer, *Surveying*, Vols. I and II (Wiley).
- 7. Survey School.** 4 weeks at end of sec. half.
Field work including adjustment of instruments; railway preliminary and location surveys; cross-sectioning; staking out buildings; determinations of azimuth, longitude, latitude and time by solar and stellar observations; base line measurements; angular measurements. Daily lectures on practical astronomy and geodesy including problems and methods of observing for latitude, time, longitude, and azimuth sufficient to meet the needs of the practical surveyor.
Text-book: Hosmer, *Astronomy* (Wiley).

Senior Courses.

- 52. Foundations.** 1 hr. lect.
Classification, examination and bearing power of soils; design of foundations; pile foundations; spread footings; coffer-dams; pneumatic caissons.
Text-book: Jacoby and Davis, *Foundations for Bridges and Buildings* (McGraw-Hill).
- 53. Theory of Structures.** 3 hrs lect.
Influence lines and maximum stresses under static and moving loads for beams, girders and trusses; lateral and portal bracing; viaduct towers and spaced frames; deflection and camber; method of least work; masonry structures; arches; suspension bridges..
Text-book: Spofford, *Theory of Structures*, (McGraw-Hill).
- 55. Hydraulics.** 3 hrs lect., 3 hrs lab. sec half.
Fundamental principles considered and applied to problems on discharge from orifices, notches, weirs, pipes and open channels; theory of impact of jets, turbines, pumps, hydraulic transmission of power; ac-

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cumulators and lifts; discussion of hydrology; steam measurements and waterpower development. Laboratory work illustrates principles and includes measurements of discharge from orifices and notches, tests of hydraulic ram, Pelton wheel, reaction turbine and centrifugal pump.

Text-book: Gibson, *Hydraulics and Its Application* (Constable).

57. Applied Thermodynamics. 2 hrs lect. first half.
2 hrs lect., 3 hrs lab. sec. half.

Fuel and combustion: steam boilers, engines, turbines and auxiliary machinery; the gas producer; internal combustion engine; compressed air; refrigeration.

Text-book: Ripper, *Steam Engine Theory and Practice* (Longmans & Co.).

Reference books: Clerk, *The Gas Petrol and Oil Engine* (Longmans & Co.); Robson, *Power Gas Producers* (Arnold).

59. Water Supply and Sewage Disposal. 2 hrs lect., 3 hrs lab.

Water Supply: Quantity, quality, and pressure requirements; rainfall and evaporation; collection and storage works; purification works; distribution system and details; designs and estimates.

Sewage Disposal: Separate and combined systems; collection methods; pipe layout and details; purification and dilution treatments; laws and regulations affecting sewage disposal.

Text-books: Turneaure and Russell, *Public Water Supplies* (Wiley); Foldwell, *Sewerage* (Wiley).

Reference: Metcalfe and Eddy, *American Sewerage Practice*, Vols. I, II, III (McGraw-Hill).

62. Structural Design. 1 hr lect. first half.
1 hr lect., 3 hrs lab. sec. half.

Practical design of members in simple tension, columns and beams; rivets and rivetting; timber framing; loads on structures; roof trusses; building frame layouts; latticed columns, tension and compression members under direct stress and bending; eccentric connections.

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The design and detailing of a steel roof truss will be carried out in draughting room.

Text-book: Thayer, *Structural Design*, Vol. I (Van Nostrand).

- 63. Structural Design.** 2 hrs lect., 3 hrs lab.
History of bridge engineering; plate girders, loads, floor systems, types, design; reinforced concrete buildings and bridges; slow burning mill construction. Designs of a plate girder bridge, a reinforced concrete building and a retaining wall will be done in the draughting room.
- 66. Testing Laboratory.** 3 hrs lab.
Standard tests of materials of construction including reinforced concrete beams and volumns.
- 67. Applied Mechanics.** 3 hrs lect., 3 hrs lab. first half.
2 hrs lect. sec. half.
Lectures and exercises on the strength of materials and applied dynamics. Theory is illustrated by a large number of practical problems including applications to columns, beams and girders, continuous girders, shafting, thick hollow spheres and cylinders, rotating discs, reinforced concrete, hooks, etc.
Text-book: Morley, *Strength of Materials* (Macmillan).
- 70. Applied Mechanics.** 2 hrs lect. first half.
Shorter but similar to C.E. 67. Problems and applications are adapted to meet the needs of the mining engineer and include design of ropes, head-fraces, etc.
Text-book: Morley, *Strength of Materials* (Macmillan).
- 71. Applied Mechanics.** 2 hrs lect., 3 hrs lab. first half.
2 hrs lect. sec. half.
Lectures and exercises to include fundamental principles of statics and applications to problems arising in building construction such as columns, beams, girders, roof trusses, etc.
- 74. Land Transportation.** 3 hrs lect.
Financing of railway and highway projects; economics of construction, operation and maintenance; construction details; methods of location; care of city streets.
Text-book: Blanchard, *Elements of Highway Engineering* (Wiley).

CLASSICS

DEPARTMENT OF CLASSICS

Professor Alexander, Associate Professor Misener, Mr. W. G. Hardy, and Dr. Cox.

Latin

Junior Courses.

- A. Matriculation Latin.** 3 hrs.
A course designed to enable students with a deficiency in entering Latin to satisfy the matriculation requirement in that subject.
Inglis and Prettyman, *First Book in Latin* (Macmillan); Cornelius Nepos, *Vita Themistoclis*, Ovid, *Metamorphoses* (selections).
- 1. First Year Latin Authors.** 2 hrs.
Cicero, *In Catilinam I and II* (Upcott: Oxford); Terence, *Adelphi* (Ashmore: Macmillan); sight translations from Cicero.
- 3. First Year Latin Prose Composition.** 1 hr.
A study of the major principles of Latin prose syntax; memorization of typical Ciceronian passages.
New Latin Prose Composition (Bennett: Allyn and Bacon).
- 2. Second Year Latin Authors.** 2 hrs.
Pliny, *Select Letters* (Prichard and Bernard: Oxford); Vergil, *Georgics I* and *Eclogues* (Papillon and Haigh: Oxford).
Sight translation especially from Silver Latin.
- 4. Second Year Latin Prose Composition.** 1 hr.
Review of first year Latin prose; bi-weekly exercises in continuous Latin prose composition; memorization of typical passages.
Advanced Latin Prose Composition (Nutting: Allyn and Bacon).
- 36. Pharmaceutical Latin.** 1 hr.
A course in Latin essentials as required in the School of Pharmacy.
Latin for Pharmacists (Howe and Beard: Blakiston).

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Senior Courses.

51. **Latin Literature of the Republic, First Course.** 3 hrs.
Cicero, *Select Letters* (Abbott: Ginn); Catullus, *Select Poems* (Merrill: Ginn). Sight translation; Latin prose composition.
Course for fourth year students in 1921-22.
52. **Latin Literature of the Empire, First Course.** 3 hrs.
Tacitus, *Annals I-IV* (Furneaux: Oxford); Juvenal, *Select Satires* (Pearson and Strong: Oxford). Sight translation; Latin prose composition.
53. **Latin Literature of the Empire, Second Course.** 3 hrs.
Seneca, *Epistulae Morales* (Summers: Macmillan); Martial, *Select Epigrams* (Bridge and Lake, Vol. 1: Oxford). Sight translation; Latin prose composition.
54. **Latin Literature of the Republic, Second Course.** 3 hrs.
Cicero, *De Officiis* (Holden: Cambridge); Lucretius, *De Rerum Natura I, III, V* (Merrill: American Book Co.). Sight translation; Latin prose composition.
Course for third year students in 1921-22.
55. **Latin Literature of the Empire, Third Course.** 3 hrs.
Tacitus, *Agricola, Germania, Dialogus*; Horace, *Satires and Epistles*. Sight translation; Latin prose composition.
56. **Latin Literature of the Empire, Fourth Course.** 3 hrs.
Tacitus, *Histories I and II*; Lucan, *Pharsalia* (selections). Sight translation; Latin prose composition.
57. **Latin Literature of the Republic, Third Course.** 3 hrs.
Plautus, *Aulularia*; Terence, *Hautontimoroumenos*; Cicero, *Second Philippic*. Sight translation; Latin prose composition.

Honours and Graduate Courses.

101. **Latin Elegiac Poetry.** 2 hrs.
102. **Latin Comedy.** 2 hrs.
103. **Lucretius.** 2 hrs.
The critical and exegetical study of Book III and the careful reading of the entire poem.

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104. **Latin Literary Criticism, Horace and Quintilian.** 2 hrs.
111. 1 hr.
Latin prose composition of the various styles, historical, declamatory, philosophical, epistolary.
113. **Advanced Latin Sight Translation.** 1 hr.

Greek

Attention is directed to the fact that beginning with the academic year 1920-21, Greek was made wholly a university subject. The language can therefore be begun in college and this beginning course is credited towards a degree.

Junior Courses.

1. **Beginning Greek.** 3 hrs.
The fundamentals of Greek syntax; elementary Greek composition and reading.
Benner and Smyth's *First Greek Book* (American Book Co.); Colson's *First Greek Reader* (Macmillan).
2. **Second Year Greek Authors.** 2 hrs.
Colson, *First Greek Reader*, pp. 105-116; Plato, *Apology* (Williamson: Macmillan); Euripides, *Alcestis* (Earle: Macmillan). Sight translation.
4. **Second Year Greek Composition.** 1 hr.
Review of Greek forms. More difficult sentences for translation into Greek.

Senior Courses.

55. 3 hrs.
Thucydides, *VI and VII*; Sophocles, *Oedipus Tyrannus*.

Honours and Graduate Courses.

A course will be arranged in event of its being required.

Classical Philology

51. **The Culture of the Greeks and the Romans.** 3 hrs.
A study of the culture and the influence of the classical peoples based upon their literatures and political institutions. No knowledge of the original languages

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is absolutely required as the literatures will be taken up through translations. Lectures, essays, reports.

Required in the second year of students looking forward to Honours in English or in Classics; open to all students in the third and fourth years as an option in Group B.

52. The Greek and the Roman Mind. 3 hrs.

A more intimate study than the course outlined above of the attitude of the Greek and the Roman mind towards the fundamental problems of life. This will be carried out by the reading of the complete works (in translation) of some half-dozen of the great classical writers and a critical analysis of their point of view. Lectures and essays.

Course 51 is a desirable preparation but is not absolutely essential. It is the intention to limit the number of students who may take this course in order that its object may be more effectively obtained. (Not given in 1921-22.)

DEPARTMENT OF CLINICAL MEDICINE

Dr. Jamieson and Dr. Ower.

Senior Courses.

51. Clinical Medicine. 4 hrs.

Clinics at S.C.R. Hospital.

Relation of Anatomy and Physiology to Clinical Medicine. Surface markings; Physical examination of patients; history taking.

Text-books: Rawling, *Surface Markings*; Hutchinson and Rainy, *Clinical Medicine*; MacKenzie, *Symptoms and their Interpretation*.

52. Clinical Laboratory. 4 hrs sec. half.

Routine examination, chemical and microscopic, for diagnosis; urine, sputum, stomach contents, faeces, cerebrospinal fluid, exudates, blood.

Text-book: Todd, *Clinical Diagnosis*.

DAIRYING

DEPARTMENT OF DAIRYING

Professor Marker.

Senior Courses.

51. General Dairying. 1 hr lect., 2 hrs lab.

- (1) Some aspects of the development and economic importance of the dairy industry and its organization, with special reference to Alberta conditions.
- (2) The production, composition and physical properties of milk and the commercial testing of dairy products.
- (3) Principles and practice of making butter, cheese and ice cream in the home dairy, and the marketing of dairy products.

52. Factory Dairying. 3 hrs lect.-lab.

An extension of Course 51, with special application to dairy factory operations. Instruction and laboratory practice will be given in the principles and use of various tests for composition and in the commercial grading of the quality of dairy products. Dairy legislation and phases of factory management.

Other courses will be arranged later.

DEPARTMENT OF DENTISTRY

Drs. Fuller and Bulyea.

Junior Courses.

1. Prosthetic Dentistry. 1 hr lect., 5 hrs lab.

A study of the muscles and bones of mastication; the mucus membrane; the teeth; impression materials; impression taking; casts; artificial teeth; dentures; articulation and antagonization; festooning, carving, tin-foiling, finishing and polishing dentures; retention

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of dentures; vulcanite bases; metallic bases; swaged, cast; repairing dentures.

Text-book: Wilson's *Dental Prosthetics*.

Reference: Prothero's *Dental Prosthetics*; *American Text-Book of Prosthetic Dentistry*.

2. **Operative Dentistry.** 1 hr lect., 2 hrs lab. first half.
 1 hr lect., 5 hrs lab. sec. half.

Lectures and demonstrations on nomenclature, dental caries, use of instruments, filling materials and operative methods.

Laboratory course on cavity preparation, filling procedure, instrument making, general operative work.

Text-books: *Operative Dentistry*, Clyde Davis, Black, and Johnson.

3. **Prosthetic Dentistry.**

1 hr lect., 2 hrs lab. first half
3 hrs lect., 3 hrs lab. sec. half.

- (a) Examination of patients; impressions, methods, materials; trays, adjusting, individual; taking bite; occlusion and contour models; selecting teeth; face bow; anatomical articulation; principles of retention, mucosa support, mechanical supports; bases, vulcanite, celluloid, aluminium, gold, platinum, continuous gum; partial dentures.

Text-book: Wilson's *Dental Prosthetics*.

Reference: Prothero's *Dental Prosthetics*; *American Text-Book of Prosthetic Dentistry*.

- (b) History of crown work; crowns, where indicated, preparation and treatment of roots; varieties of crowns; grinding, casting, swaging, articulating; repairing crowns; causes of failure in crown work.

The laboratory course consists of making and fitting eight different varieties of crowns.

Text-book: Goslee, *Principles and Practice of Crown and Bridge Work*.

Reference: Evans, *Crown and Bridge*.

DRAWING

DEPARTMENT OF DRAWING AND DESCRIPTIVE GEOMETRY

Associate Professor Adam.

1. **Architectural Drawing.** 3 hrs.
Geometrical representation of architectural subjects, more especially the classical orders of architecture.
2. **Elementary Mechanical Drawing.** 3 hrs lab.
Use of instruments, projection, isometric drawing, simple machine details, timber framing, tinting, tracing, and blue printing. Lettering and titles.
3. **Freehand and Lettering.** 6 hrs lab.
A course related to Architecture, comprising perspective views, dimensioned sketches and lettering.
4. **Descriptive Geometry.** 1 hr lect., 3 hrs lab.
Geometrical drawing, orthographic and metric projection, sections and developments, curved surfaces and tangent planes, shades and shadows.
5. **Mechanical Drawing.** 3 hrs lab.
Preparation of working drawings from dimensioned sketches; problems on motion under mechanical constraint.

DEPARTMENT OF ELECTRICAL ENGINEERING

Professor Boyle and Associate Professor MacLeod.

- 51(a). **Theory of Direct Currents.** 3 hrs.
Required of third year students in Electrical Engineering.
- 51(b). **Direct Current Laboratory.** 6 hrs lab.
Operation of, and experiments on, storage batteries, direct current dynamos, motors, and motor-generating sets; use of measuring instruments, controlling and protective devices. Special attention is to be given to the preparation of reports on all work performed in the laboratory. Required of third year students in Electrical Engineering.

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53. **Applied Electricity.** 2 hrs lect., 3 hrs lab. first half.
2 hrs lect. sec. half.
The laws of electromagnetism; continuous and alternating current flow in various circuits; characteristics of direct and alternating current machinery; the fundamental principles of electric lighting, and power distribution. Required of senior students in Civil Engineering.
54. **Machine Design.** 2 hrs.
The principles of stresses and strength of materials as applied to particular parts of machines and machine fastenings, such as bolts, nuts, keys, cotters, and riveted joints. Required of third year students in Electrical Engineering.
Text-book: Unwin, *Machine Design, Part I* (Longmans, Green).
55. **Mechanics of Machines.** 2 hrs lect., 1 hr lab.
Discussion of and problems on the principles involved in the design of gear trains, gear teeth, valves, valve gears, valve diagrams, etc. Required of third year students in Electrical Engineering.
Text-book: Schwamb and Merrill, *Elements of Mechanism* (Wiley).
56. **Mechanical Drawing.** 3 hrs lab. sec. half.
Preparation of working drawings, tracings, etc., the principles discussed in the lectures of Mechanics of Machines being used to design cams, quick return motions, gear teeth, valves and valve gears. Required of third year students in Electrical Engineering.
58. **Power Distribution, Lighting, and Traction.** 2 hrs.
59. **Alternating Currents.** 3 hrs lect., 6 hrs lab.
For fourth year Electrical Engineering students.
60. **Electrical Applications and Design.**
2 hrs lect., 3 hrs lab.
61. **Telegraphy and Telephony.** 2 hrs lect., first half.
62. **Electro-Chemistry and Metallurgy.** 2 hrs.
63. **Machine Design.** 2 hrs first half.

ENGLISH

DEPARTMENT OF ENGLISH

Professor Broadus, Professor Gordon, and Mr. Wallace.

Junior Courses.

1. Composition and Literature. 3 hrs.

Practice in composition (with the *Century Handbook of Writing*) and study of selected texts.

The following works are prescribed, in part, as illustrative material for the work in composition, in part as an approach to the general appreciation of literature: Shakespeare, *Henry IV, Part I* (Warwick Shakespeare); Reade, *The Cloister and the Hearth* (Lake English Classics); Scott, *Quentin Durward* (Lake English Classics); Thackeray, *Henry Esmond* (Lake English Classics); Dickens, *Tale of Two Cities* (Lake English Classics); Kipling, *Kim*, (Doubleday, Page and Co.).

The reading of the above works will be accompanied by a discussion of essays from *Books and Ideals* (Oxford Press).

2. A General Reading Course in English Prose. 3 hrs.

A survey of English prose from the seventeenth century to the present day, based on selections from the following authors: Bacon, Browne, Milton, Dryden, Swift, Addison, Richardson, Fielding, Johnson, Sterne, Smollett, Burke, Scott, Coleridge, Jane Austen, Lamb, Hazlitt, Carlyle, Macaulay, Thackeray, Dickens, George Eliot, Ruskin, Arnold, Stevenson, Meredith and Hardy.

English Prose from Bacon to Hardy, edited by E. K. Broadus and R. K. Gordon (Oxford Press).

3. Composition for Students in Agriculture. 1 hr.

Written and oral themes on agricultural topics.

4. Composition and Literature. 3 hrs.

Practice in composition (with the *Century Handbook of Writing*) and study of selected texts, for students in Agriculture.

The following works are prescribed, in part as illustrative material for the work in composition, in part as an approach to the general appreciation of literature: Reade, *The Cloister and the Hearth* (Lake English Classics); Scott, *Quentin Durward* (Lake English Classics); Thackeray, *Henry Esmond* (Lake English Classics); Dickens, *Tale of Two Cities* (Lake English Classics).

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Senior Courses.

- 52. A History of English Fiction.** 3 hrs.
Lectures and class discussion.
Students are required to read the following works: Lodge's *Rosalind*; Bunyan's *Pilgrim's Progress*; Defoe's *Robinson Crusoe*; Smollett's *Roderick Random*; Richardson's *Clarissa Harlowe*; Fielding's *Tom Jones*; Sterne's *Tristram Shandy*; Goldsmith's *Vicar of Wakefield*; Scott's *Waverley*; Jane Austen's *Pride and Prejudice*; Dickens' *David Copperfield*; Thackeray's *Vanity Fair*; Trollope's *Barchester Towers*; Charlotte Bronte's *Jane Eyre*; George Eliot's *Adam Bede*; Meredith's *The Egoist*; Hardy's *The Return of the Native*, and the selections in *The English Novel Before the Nineteenth Century*, edited by Hopkins and Hughes (Ginn); Cross, *The Development of the Novel* (Macmillan).
- 53. Shakespeare.** 3 hrs.
Lectures and class discussion.
Special study of the following plays: *Midsummer Night's Dream*, *Twelfth Night*, *The Tempest*, *Romeo and Juliet*, *Hamlet*, *King Lear*.
Collateral reading: *King John*; *Henry IV, Part I*; *Henry IV, Part II*; *Henry V*; *The Tudor Shakespeare* (Macmillan).
- 54. Composition for Students in Agriculture.** 1 hr.
Written and oral themes on agricultural topics.
- 55. History of Literary Criticism.** 3 hrs.
Lectures and class discussion.
Study of selected critical essays with special attention to the study of the following: Aristotle, Longinus, Quintilian, Sidney, Jonson, Dryden, Johnson, Wordsworth, Coleridge, Hazlitt, Shelley, Carlyle, Arnold.
Text-books: Saintsbury, *Loci Critici* (Ginn); Dryden, *Dramatic Essays* (Dent); *English Critical Essays* (Oxford).
- 57. Studies in the Poets of the Romantic Period.** 3 hrs.
Lectures and class discussion.
Wordsworth, Coleridge, Scott, Byron, Shelley, Keats. Editions in the *World's Classics* (Oxford).
- 58. Browning and Tennyson.** 3 hrs.
Lectures and class discussion.
The Globe Editions (Macmillan). (Not given 1921-22.)

ENGLISH

59. Nineteenth Century Prose.

3 hrs.

Lectures and class discussion.

Study of J. S. Mill, Carlyle, Newman, Arnold, Ruskin, Huxley, as representative of nineteenth century thought.

J. S. Mill, *Liberty, Utilitarianism* (Everyman's Library); Carlyle, *Sartor Resartus*, edited by MacMechan (Ginn); *Heroes and Hero-Worship*, edited by MacMechan (Ginn); *Past and Present* (World's Classics); Newman, *Apologia* (Oxford); *Idea of a University* (Selections, Houghton Mifflin); Arnold, *Selections*, (Holt); Ruskin, *Selections and Essays* (Scribners); Huxley, *Lay Sermons* (Everyman's).

60. Milton.

3 hrs.

Lectures on essential aspects of seventeenth century life and literature. Special study of *Paradise Lost*, and of selections from the prose works and minor poems.

Milton's Poetical Works (Oxford); *Prose of Milton*, edited by Richard Garnett (The Scott Library). (Not given 1921-22.)

61. Journalism.

3 hrs.

Lectures on the technique of various forms of journalistic writing, on current literature, and on current affairs. Practice in writing and editing articles for publication. The study of representative newspapers.

Cunliffe and Lomer, *Writing of Today* (The Century Co.); Harrington and Frankenberg, *Essentials in Journalism* (Ginn and Co.).

All work submitted must be typewritten. Students are expected to consult the instructor before enrolling in this course.

Honours.

Group A:

106. Studies in Elizabethan Literature.

3 hrs.

Special topics to be arranged in consultation with the instructor.

107. Studies in Early Nineteenth Century Literature. 3 hrs.

Special topics to be arranged in consultation with the instructor.

The following second year programme is prerequisite for Honours in Group A: English 2, Classical Philology 1, History 2, a foreign language, an option.

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Group B:

104. Old English and History of the English Language.

Emerson, *History of the English Language* (Macmillan); Sweet, *Anglo-Saxon Primer* (Oxford); Chambers and Wyatt, *Beowulf* (Cambridge University Press).

105. Middle English Literature and Chaucer. 3 hrs.

Emerson, *Middle English Reader* (Macmillan); Chaucer, *Works* (Oxford).

Open only to students who have taken 104.

The following second year programme is prerequisite for Honours in Group B: English 2, Classical Philology 1, Latin or French, History 3, an option.

DEPARTMENT OF FIELD HUSBANDRY

Professor Cutler, and Assistant Professors Newton and Fryer.

Junior Courses.

1. Crop Production. 2 hrs lect. first half.

In this course it is intended to give a general knowledge of the principles and practice of the science of crop production. It is intended as an introduction to the more detailed and intensive study of the various phases of the subject, which are taken later.

2. Climate and its Relation to Crop Production.

2 hrs lect. sec. half.

This course includes a study of the methods of recording climatic changes; climate in general as related to farm crop distribution; climatic factors of Alberta in particular in relation to crop production.

3. Seeds and Weeds. 2 hrs lab.

An intensive study is made of the seed, its structure and function; germination, essential conditions and process; plant growth; fertilization and development of seeds; normal and abnormal features of seed in relation to agricultural value; identification of the common weeds with studies of their habits of growth, reproduction and distribution, and of methods of control.

Text-book: *The Small Grains*, M. A. Carleton.

FIELD HUSBANDRY

4. (a) Forage Roots and Potato Crops.

1 hr lect., 2 hrs lab. first half.

Botanical structures and relationships are systematically studied. Variety features are compared in detail. Laboratory practice is given in the identification of the wild grasses of the Province. Diseases and pests peculiar to these crops are discussed and control measures taken up. The problem of range management is given special consideration. The study begins with the range plants, especially the vegetative associations of the drier areas, and includes a discussion of their preservation and succession, as affected by a well managed rotation grazing, or destructive grazing beyond the varying capacity of the range.

(b) Cereal Crops. 1 hr lect., 2 hrs lab. sec. half.

Botanical structures and relationships are systematically studied. Varieties are compared in detail. Agriculture uses and values of the classes and varieties are taken up. Diseases and insect pests peculiar to these crops are discussed with methods of control.

Text-book: *Forage Plants and Their Culture*, C. V. Piper;
Botany of Crop Plants, Robbins.

Senior Courses.

51. Crop Management. 2 hrs lect.

A detailed study of the best methods of soil preparation suitable for different crops and different soil and climatic conditions met with in the successful growing of crops and the control and eradication of weeds. Crop rotation and methods of harvesting, curing, threshing, storage, etc., of all farm crops; choice of crops in relation to climatic, soil and economic conditions. This course also includes a study of Crop Management Investigations and Experimental Results, which will be examined and appraised as the lecture work proceeds.

52. Economic Aspects of Crop Production.

1 hr lect., 2 hrs lab. sec. half.

This course includes a careful study of world supplies and demands in relation to the Canadian grain and

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seed trades; details of Canadian legislation with respect to commercial grain and seed and of the methods and facilities for handling Western Canadian surpluses. Grain and seed inspection standards and methods are taken up with practice in grain and seed inspection.

53. (a) Plant Breeding. 3 hrs lect. first half.

This course is designed to acquaint the student with the principles underlying the breeding of plants. It embraces a study of methods employed and results obtained by the leading plant breeders in selecting and breeding the different cereal and forage crops. It includes also a history of the early attempts at improvement and the methods of seedsmen and farmers who are maintaining and improving the purity and quality of crops.

(b) Seed Distribution.

Methods followed by the leading plant breeding and experiment stations and universities in Europe and America in the multiplication and distribution of improved strains are reviewed and the method adopted by the University of Alberta is very carefully studied.

Text-book: *Genetics in Relation to Agriculture*, Babcock and Clausen.

54. Seed and Crop Judging. 2 hrs lab.

Training is given in the judging of seeds, grains and standing crops; procedure in judging at plowing matches, field crop and better farming competitions, seed fairs, etc., in order that the student may have an accurate knowledge of the use of the score card, methods of procedure and the details involved in carrying out each of the above.

55. Experimental Methods. 1 hr lect. sec. half.

The development of present day methods in crop experimentation; procedure in laying out projects; plot management; the use of checks or replicates; yield correction; interpretation of results; calculation of experimental error and general discussion of the problem of securing results of highest value.

GEOLOGY

DEPARTMENT OF GEOLOGY

Professor Allan, Mr. Warren, Miss Lee.

- 32. Introductory Geology.** 2 hrs lect. first half.
3 hrs lab. sec. half.
External agencies of erosion; internal dynamic agents; interpretation of topographic maps; physiography of Canada; stratigraphic column; structural geology.
Text-book: Pirsson and Schuchert, *Text-Book of Geology* (Wiley).
- 33.** Same as 32 for 1921-22. Open to students taking Honours in Botany and in Economics.

Senior Courses.

- 51. General Geology.** 3 hrs lect., 3 hrs lab.
Processes of destruction and reconstruction; interpretation of physiographical features with map study; stratigraphic column with index fossils from each period; common minerals and rocks.
Text-book: Pirsson and Schuchert, *Text-Book of Geology* (Wiley).
- 52. Petrology.** 3 hrs lect., 3 hrs lab.
Physical, chemical and optical properties of common Rock-forming minerals; Classification and genesis of sedimentary, igneous and metamorphic rocks.
Text-book: Pirsson, *Rocks and Rock Minerals* (Wiley).
Reference: Iddings, *Rock Minerals* (Wiley).
Prerequisite: Geology 32.
- 53. Mineralogy and Petrology.** 3 hrs lect., 3 hrs lab.
Principles of crystallography; physical and chemical properties of metallic and non-metallic minerals; blow-pipe analysis; principles of rock classification; determination of sedimentary, igneous and metamorphic rocks.
Text-books: Lewis, *Determinative Mineralogy*; Pirsson, *Rocks and Rock Minerals* (Wiley).
Prerequisite: Geology 51.

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- 54. Mineralogy.** 2 hrs lect., 3 hrs lab. first half.
1 hr lect., 3 hrs lab. sec. half.

Physical and chemical properties of metallic and non-metallic minerals including hydrocarbons; elements of crystallography; descriptive and determinative mineralogy; blow-pipe analyses.

Text-books: Kraus and Hunt, *Mineralogy* (McGraw-Hill); Brush and Penfield, *Determinative Mineralogy and Blow-Pipe Analyses* (Wiley).

Prerequisite: Geology 32. Geology 52 may be taken at same time.

- 55. Stratigraphy.** 3 hrs lect., 3 hrs lab.

Discussion of principles of stratigraphy; special consideration to stratigraphy of North America with index fossils from each of the periods; interpretation of geological maps.

Text-book: Pirsson and Schuchert, *Text-Book of Geology*, Part II (Wiley).

Reference: A Grabau, *Principles of Stratigraphy*.

Prerequisite: Geology 51.

- 58. Mineral Deposits.** 3 hrs lect., first half.
3 hrs lect., 3 hrs lab. sec. half.

Classification, mode of occurrence and geological relations of various types of mineral deposits, including petroleum, natural gas and coal. Emphasis will be given to Alberta mineral deposits, including clays.

Text-Books: W. Lindgren, *Mineral Deposits* (McGraw-Hill); W. H. Emmons, *Principles of Economic Geology* (McGraw-Hill); W. H. Emmons, *Geology of Petroleum* (McGraw-Hill).

- 62. Palaeontology.** 3 hrs lect., 3 hrs lab.

Principles of classification; comparison with modern forms; representative fossils from each geological period; determination of type material.

Text-book: Shimer, *Introduction to the Study of Fossils* (Macmillan).

Reference: Zittel, *Text-Book of Palaeontology* (Macmillan).

Prerequisite: Geology 51.

HISTORY

Honours Courses.

- 101. Canadian Geology.
- 102. Stratigraphical Geology.
- 103. Petrography.

DEPARTMENT OF HEBREW

Professor Miller.

Senior Courses.

- 51. Elements of Hebrew. 3 hrs.
- 52. Old Testament Historical Literature. 3 hrs.
(Not offered 1921-22.)
- 53. Selected Readings from Prophetic Books. 3 hrs.

DEPARTMENT OF HISTORY

President Tory, Professor Burt, Assistant Professor Long.

Junior Courses.

- 1. General History. 3 hrs.
Outlines of General History from the Renaissance to the present day.
Text-books: Robinson, *Mediaeval and Modern Times*; Robinson, *Readings in European History, Vol II.*
- 2. British History. 3 hrs.
From the Tudor period to the present day.
Text-books: Gardiner, *Student's History of England, Vols. II. and III*; *Atlas of English History.*
- 3. British History. 3 hrs.
From the beginnings to 1485.
Text-books; Oman, *England before the Norman Conquest*; Davis, *England under the Normans and Angevins*; Vickers, *England in the Later Middle Ages.*
Reference readings will be assigned during the course.
This course is designed only for students intending to read for Law or for Honours in History and is to be taken in conjunction with History 2.

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Senior Courses.

- 53. European History.** 3 hrs.
From the Barbarian Invasions to the fall of the Hohenstaufen.
Text-books: Emerton, *Introduction to the Middle Ages*; Emerton, *Mediaeval Europe*.
Reference readings will be assigned during the course.
- 54. European History.** 3 hrs.
From the Renaissance to the end of the Wars of Religion.
Text-books: Symonds, *Short History of the Italian Renaissance*; Froude, *Life and Letters of Erasmus*; Lindsay, *History of the Reformation*; Harrison, *William the Silent*; Gardiner, *Thirty Years' War*; *Cambridge Modern History* (selected chapters).
Reference readings will be assigned during the course.
(Not offered 1921-22.)
- 56. European History.** 3 hrs.
From the Congress of Vienna to the present day.
Text-books: Hazen, *Europe Since 1815*; Powers, *The Things Men Fight For*; Robinson and Beard, *Readings in Modern European History, Vol. II*.
Reference books: Lichtenberger, *Germany and its Evolution in Modern Times*; Steed, *The Hapsburg Monarchy*; Fisher, *The Republican Tradition in Europe*; Cesaresco, *The Liberation of Italy*; Lowell, *Governments and Parties in Continental Europe*; *Cambridge Modern History* (selected chapters).
Other reference readings will be assigned during the course.
- 57. English Constitutional History.** 3 hrs.
Text-books: Maitland, *Lectures on English Constitutional History*; Adams and Stephens, *Select Documents of English Constitutional History*; Dicey, *The Law of the Constitution*.
Reference readings will be assigned during the course.
- 58. Canadian History.** 3 hrs.
Political and constitutional.
Text-books: Lucas, *New France*; Egerton, *Canada Under British Rule*; Durham's Report; Kennedy, *Documents of the Canadian Constitution*.
Reference readings will be assigned during the course.
(Not offered 1921-22.)

HISTORY

Honours and Graduate Courses

101. English History. 3 hrs.

From the accession of James I to the Restoration.

Text-books: Montague, *History of England*, 1603 to 1660 for the general outline; Gardiner, *History of England*, 1603 to 1642; *History of the Great Civil War*; *History of the Commonwealth and Protectorate*; Firth, *Last years of the Protectorate*; *House of Lords During the Civil War*; *Cromwell's Army*; *Cromwell*; Hutton, *Laud*; Traill, *Strafford*; Prothero, *Statutes and Constitutional Documents 1559-1625*; Gardiner, *Constitutional Documents of the Puritan Revolution*, 1625-1660; Carlyle, *Cromwell's Letters and Speeches*; Clarendon, *History of the Rebellion and Civil Wars in England*; Whitlocke's *Memorials*; Ludlow's *Memoirs*; Pepys' *Diary*; *The Clarke Papers*.
(Not offered 1921-22.)

102. European History. 3 hrs.

From the outbreak of the French Revolution to the Congress of Vienna.

Text-books: Madelin, *The French Revolution*, and Rose or Fournier, *Napoleon I*, for the general outline; De Tocqueville, *L'Ancien Régime*; Taine, *Les Origines de la France Contemporaine*; Sorel, *L'Europe et la Revolution Française*; Belloc, *Danton*; Mahan, *The Influence of Sea Power on the French Revolution and Empire*; Morse Stephens, *The French Revolution*; Acton, *Lectures on the French Revolution*; Vandal, *L'Avènement de Bonaparte*; Fisher, *Napoleonic Statesmanship*; Aulard, *Political History of the French Revolution*; *Etudes et Leçons*; *The Cambridge Modern History*; Lavissee et Rambaud, *Histoire Générale*; von Sybel, *Geschichte der Revolutionszeit*; Seeley, *The Life and Times of Stein*; Oman, *A History of the Peninsular War*. Houssaye, 1814, 1815.

DEPARTMENT OF HISTORY OF AGRICULTURE

Dean Howes.

Junior Courses.

1. History of Agriculture. 1 hr.

Study of ancient agriculture: South American, Grecian, Roman.

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2. **History of Agriculture.** 1 hr.
Evolution of agriculture in England and in continental Europe.

Senior Courses.

51. Study of the development of agriculture in America, particularly in Canada.

DEPARTMENT OF HORTICULTURE

Mr. Harcourt.

Junior Courses.

1. **Horticulture.** 1 hr lect., 2 hrs lab.

Fruit Gardening.

Propagating, planting, cultivating, pruning, grafting, budding and hybridizing fruits; developing hardy varieties.

Landscape Gardening.

The making and care of lawns; the planting of trees, shrubs, and flowers for decorative purposes; beautifying the home; windbreaks and screens; farm forestry.

Senior Courses.

51. **Horticulture.** 2 hrs lect., 2 hrs lab.

Vegetable Gardening.

The selection of soils and locations; general principles of vegetable growing; cultural methods; hot beds, cold frames and their management; fertilizers; commercial gardening; forcing under glass.

Floriculture.

The principles underlying the propagating and growing of flowers for the house and garden, hanging baskets and window boxes.

Fruit Growing.

The selection of soils and locations; suitable shelter; the propagating, planting and cultivating of small

HOUSEHOLD ECONOMICS

fruits; the principles of pruning, grafting and budding; hybridizing fruits; the development of hardy fruits.

Landscape Gardening.

The making and care of lawns, walks, and flower borders. Planting trees, shrubs and flowers; beautifying the home grounds.

Farm Forestry.

The principles of farm forestry; the care and management of the farm nursery; plantations for the protection of buildings, crops and stock; the farm wood lot.

DEPARTMENT OF HOUSEHOLD ECONOMICS

Miss Patrick and Miss Deadman.

Junior Courses.

1. 4 hrs sec. half.
Sewing.
Instruction in hand and machine sewing as applied to the making of simple garments.
2. 3 hrs lect., 3 hrs lab. first half.
Home Nursing.
Home care of the sick; emergencies; simple bandages.
Textiles.
The composition, physical properties and manufacture of fabrics; influence of these on selection and methods of cleansing.
3. 3 hrs lect., 3 hrs lab. sec. half.
Household Management.
Materials found in the home; principles involved in their care; the house, its equipment and furnishing. Labor-saving devices.
Foods.
An introduction to the study of foods and cookery.

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31. 4 hrs lab.

Experimental Cookery.

Experimental study of foods to determine the best methods of preparation. Individual problems will be assigned.

32. 3 hrs lect., 3 hrs lab.

Textiles.

Fibres: Classification; physical and chemical structure; physical and chemical test for fibres.

Fabrics: Manufacture; adulterations; uses in the household; laundering of fabrics.

Household Management.

Materials found in the home; principles involved in their care; the house; its equipment and finishings; labor saving devices.

Senior Courses.

51. 3 hrs lect., 3 hrs lab.

Foods.

A study of foods; laboratory practice in food preparation.

Home Nursing.

The care of the sick in the home.

Household Management.

The care of the house, furnishings and equipment; labor-saving devices.

52. 3 hrs lect., 3 hrs lab.

Economics of the Household.

The home as a business; the income and its expenditure; standards of living, budgets; household and personal accounts.

Foods.

Nutritive value and cost of foods; food for the family group; planning and preparation of meals; special diets.

Prerequisite: 51.

MATERIA MEDICA

55. 4 hrs lect., 6 hrs lab.
Foods. Lectures and discussion.
Typical foods—production, manufacture, composition, value in the diet. Supplementary reading will be required and used as a basis for class discussion.
Laboratory work: an experimental study of foods; the principles of cookery. Preparation of typical foods.
56. 2 hrs.
Economics of the Household.
The home as a business; the income and its expenditure; standards of living, budgets; household and personal accounts.
57. 2 hrs lect., 3 hrs lab.
Dietetics.
The principles of nutrition applied to the feeding of individuals and the family group under normal conditions. Diets for special cases.
58. 3 hrs lab. first half.
Invalid Cookery.
An application of the principles of cookery to dishes for the sick and convalescent.
59. 3 hrs sec. half.
Methods.
The problem of teaching Household Economics; equipment, arrangement of courses; methods of presentation of subject matter; demonstrations.

DEPARTMENT OF MATERIA MEDICA

Professor Gaetz.

Junior Courses.

1. **Official Drugs.** 4 hrs lect.
Inorganic and organic.
3. **Official Drugs.** 1 hr lect.
A selected group, both inorganic and organic. For Medical students.

UNIVERSITY OF ALBERTA

4. 1 hr lect., 2 hrs lab.

A course for students in Dentistry. It deals with the source, physical properties, chemical constitution and properties, pharmacy and pharmacology of a selected list of important drugs of special significance to dental practitioners. It is co-ordinated and runs concurrently with a laboratory course in Pharmacology.

Senior Courses.

51. **Official Drugs.** 4 hrs lect.
Inorganic and Organic.

52. **New and Nonofficial Drugs.** 3 hrs lect.

A selected list of important new drugs and a more minute study of some important official drugs.

Text-books: Bruce and Dilling, *Materia Medica and Therapeutics*; *British Pharmacopoeia*; American Medical Association, *New and Nonofficial Remedies* (Students in *Materia Medica* 52 only).

Supplementary: Greenish, *Materia Medica*; Squire's *Companion to the British Pharmacopoeia*; Culbreth, *Materia Medica and Pharmacology*; Martindale, *Extra Pharmacopoeia*.

DEPARTMENT OF MATHEMATICS

Professor Sheldon, Professor Killam, Associate Professor Campbell, Mr. Milne, and Mrs. Mitchell.

Junior Courses.

1. **General Elementary Mathematics.** 3 hrs.

Lectures on the fundamental principles and methods of algebra, geometry, trigonometry, and statistics; applications of mathematics in science, industry and art.

Text-books: Whitehead, *Introduction to Mathematics* (Home Univ. Lib.); Thomson, *Introduction to Science* (Home Univ. Lib.); Young and Morgan, *Elementary Mathematical Analysis* (Macmillan).

Reference books: *Science and the Nation* (Cambridge); Thompson, *Growth and Form* (Cambridge); Brinton, *Graphic Methods* (Eng. Mag. Co.).

Required for first year students in Arts and Sciences and in Architecture.

MATHEMATICS

- 2.** 3 hrs.
The technique of Mathematics I; required of first year students in Architecture, and of students taking Mathematics I in preparation for Engineering.
Text-books: Clapham, *Arithmetic for Engineers* (Dutton); Saxelby, *Course in Practical Mathematics* (Longmans); Young and Morgan, *Elementary Mathematical Analysis* (Macmillan).
- 3.** 3 hrs.
The advanced section of Mathematics I: lectures on the most fundamental topics in Mathematics I and 7. For students who intend to begin specialization in scientific subjects in the second year.
Text-book: Young and Morgan, *Elementary Mathematical Analysis* (Macmillan).
- 7. Algebra and Analytic Geometry.** 3 hrs.
Elementary functions; analytic geometry; statistics.
Text-books: Gale and Watkeys, *Elementary Functions* (Holt); Smith and Gale, *New Analytic Geometry* (Ginn).
- 21. Elementary Mathematical Analysis.** 6 hrs.
Power, polynominal, exponential, logarithmic and circular functions. Graphic algebra. Errors and approximations; slide rule; tables; theory of equations; infinite series; derivatives and anti-derivatives. Applications to plane and solid geometry and spherical trigonometry.
Text-books: Gale and Watkeys, *Elementary Functions* (Holt); Smith and Gale, *New Analytic Geometry*, (Ginn); Betz and Webb, *Solid Geometry* (Ginn); Murray, *Spherical Trigonometry* (Longmans).
Required of first year students in Engineering and of second year students in Architecture.
- 22. Elementary Mechanics.** 2 hrs lect., 3 hrs lab.
Kinematics; vectors; Newton's laws, with applications to dynamics; impact, direct and oblique; work, energy, power; moments of forces; centres of gravity; dynamics of rotation and revolution; simple harmonic motion; machines; elasticity; hydrostatics and hydrodynamics, including Bernoulli's theorem.
Text-books: Duncan and Starling, *Text-book of Physics, Part I* (Macmillan), omitting Chapters I, II, XI, and XXII.

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- 25 and 26. Calculus and Mechanics.** 6 hrs.
A first course in the Calculus. Statics and Dynamics. Applications of the Calculus in various sciences, especially in Mechanics.
Text-books: Caunt, *Introduction to Infinitesimal Calculus* (Oxford); Lamb, *Dynamics and Statics* (Cambridge).
- 31. Elementary Mathematics (Agriculture).** 3 hrs.
Review of Arithmetic; fundamental methods of algebra; computation; statistical and other graphs.
Text-books: Clapham, *Arithmetic* (Dutton).
Reference books: Brinton, *Graphical Methods* (Eng. Mag. Co.); Wolff, *Mathematics for Agricultural Students* (McGraw-Hill).
- 32. Elementary Mathematics (Medicine).** 2 hrs first half.
Proportion, similitude, rate of growth; elementary trigonometry; measurement, approximation and accuracy; computation; graphical methods; elementary statistics.
Text-book: King, *Elements of Statistical Method* (Macmillan).
Reference books: D'Arcy W. Thompson, *Growth and Form* (Cambridge); Brinton, *Graphical Methods* (Eng. Mag. Co.); Clapham, *Arithmetic* (Dutton).
- 33. Mathematical Statistics (Agriculture).** 3 hrs first half.
The statistical methods used in Genetics; computation.
Text-books: King, *Elements of Statistical Method* (Macmillan); (Babcock and Clausen; Davenport; Wolff).
- 36. Elementary Mathematics (Pharmacy).** 1 hr.
The arithmetic and algebra required in Pharmacy.
Text-book: Stevens, *Arithmetic of Pharmacy* (Van Nostrand).
- 41. Elementary Mathematics (Commerce).**
For students preparing for the Intermediate Examination of the Institute of Chartered Accountants.

Advanced Courses.

Students in the Faculty of Arts and Sciences who intend to read for honours are required to take in the first year Mathematics 3 and in the second year Mathematics 55 and 22.

MATHEMATICS

Senior Courses.

- 53. Astronomy.** 3 hrs.
History of early astronomy, study of the earth; astronomical coordinates, time. The solar system, the stars, structure of the universe, origin of the solar system. Practical work in the observatory; study of the constellations; discussion of articles in current journals.
Text-book: Moulton, *Introduction to Astronomy* (Macmillan).
- 55. Calculus.** 3 hrs.
As in Mathematics 25, with additional topics.
- 56. Mechanics.** 3 hrs.
As in Mathematics 26, with additional topics.
- 57. Advanced Calculus.** 3 hrs.
A second course in the Calculus, including differential equations.
Text-book: Woods and Bailey, *Course in Mathematical Analysis, Part II*.
- 58. Advanced Mechanics.** 3 hrs.
Dynamics of rigid bodies; celestial mechanics. (Not offered in 1921-22.)
- 61. Theory of Finance.** 3 hrs.
Interest, annuities, amortization, valuation of bonds, sinking funds and depreciation, theory of probability; elements of the mathematical theory of life assurance, including the calculation of net premiums.
Text-book: Skinner, *Mathematical Theory of Investments* (Ginn); *Institute of Actuaries' Text-book, Part II*.
- 62. Statistics.** 3 hrs.
Use of statistics, collection of material and the history of statistics; frequency distributions and graphical representation of statistical results; averages; dispersion, correlation; statistical application of life tables.
Text-book: West, *Mathematical Theory of Statistics* (Ginn).

UNIVERSITY OF ALBERTA

- 63. Graphical and Numerical Methods (Engineering).**
2 hrs lect., 3 hrs lab. sec. half.
Application of graphical methods to algebra and calculus. Nomography. Introduction to the theory of probabilities and measurements.
Text-book: Lipke, *Graphical and Numerical Methods* (Wiley).
- 64. Vector Analysis.** 3 hrs.
(Not offered in 1921-22.)

Honours Courses.

The courses offered will be selected from the following:

101—110.

Elementary Theory of Functions; Graphical and Numerical Methods; Solid Analytic Geometry; Projective Geometry; Theory of Functions; Algebra; Differential Equations; Mechanics (Honours); Finance (Honours); Fundamental Topics.

Graduate Courses.

Courses for the Master's degree may be arranged in conference with the head of the department.

DEPARTMENT OF MINING ENGINEERING

Professor Pitcher and Associate Professor Cameron.

The Department undertakes to find employment for all its students during the summer months in the mines of Alberta and British Columbia, thereby giving them opportunity to get the necessary practical experience in their chosen field.

All students are required to take the Mine Survey School at the end of their third year.

The Department does not require the student to purchase text books for the various courses, but prescribes a list of references from which he is expected to do selected reading. Certain handbooks and standard text-books are recommended as desirable for constant reference and to form the nucleus of a reliable working library.

MINING ENGINEERING

Three options—Coal Mining, Metal Mining and Mining Geology, are offered in the fourth year. The student is expected to decide at the end of the third year which course he desires to follow, and his work is laid out accordingly. e

Senior Courses.

52. Mining Plant. 2 hrs lect., 3 hrs lab. sec. half.

Outline of standard plant requirements for a mine. Mine cars, chutes and chute gates, cages and skips, shafts, ropes, sheaves and pulleys, dumping arrangements, screening plant and breaker house, weigh baskets. Drafting room work on arrangement and design of plant. Concurrent with M.E. 56.

54. Fire Assaying. 1 hr lect., 6 hrs lab. first half.

Furnaces, balances and other apparatus, sampling and preparation of ores for assay. Special methods of assay; assays for gold and silver. Prerequisite: Chem. 1.

56. Principles of Mining. 1 hr lect.

Surface and underground prospecting, deep drilling, earth and rock excavation, drills and coal cutters, blasting rock and coal, development work, shafts, drifts and entries, subsidence and support of excavations, timbering, drainage. Concurrent with M.E. 52.

57. Mine Survey School.

An extended trip to visit local and other mining districts of the province and adjacent mining areas of British Columbia. Detailed reports on all mines visited are required from each student. A number of days are spent on practical underground surveying, and a closed survey of at least ten sights made. Field notes of the survey and plotted map are required of each student. Members of the Geology Department of the University accompany the survey school and the areal geology of each district will be studied under their supervision.

Prerequisite: C.E. 7

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- 58. Metallurgy.** 2 hrs. lect., 3 hrs. lab., sec. half.
Metallurgical fuels, calorimetry and pyrometry, refractory materials, introduction to metallography and study of alloys, metallurgy of iron and steel, copper, lead and zinc.
Prerequisite: Chem. 55.
Required of students taking Metal Mining and Mining Geology.
- 59. Coal Mining.** 2 hrs. lect., 3 hrs. lab.
Coal mine development, pit bottom, entries, pillars, room and pillar running, longwall mining, flat seams, pitching seams, thick seams, multiple seams, illumination, preparation of coal for market, coal washing, examination, valuation and administration.
Prerequisite: M.E. 56.
Required of students taking Coal Mining.
- 60. Metal Mining.** 2 hrs. lect., 3 hrs. lab. 1st half.
Alluvial mining, hydraulic mining, open cuts and quarrying, glory hole and milling, underhand and overhand stoping, open and timbered stopes, shrinkage stopes, filled stopes, caving methods, illumination and ventilation, mine examination, valuation and administration.
Prerequisite: M.E. 56.
Required of students taking Metal Mining or Mining Geology.
- 61. Mining Machinery.** 3 hrs. lect., sec. half.
Head frames and tipples, bins, winding engines, drums, gravity planes, engine planes, hoisting and haulage, aerial tramways, pumps, compressors, power plant layout, etc.
Prerequisites: M.E. 52, C.E. 57.
- 62. Ventilation.** 2 hrs. lect., sec. half.
Gasses found in coal mines, natural and artificial ventilation, mine resistance, airways and control of air current, splits, brattices, doors, regulators, disc and centrifugal fans, mine fires and explosions, mine rescue.
Prerequisite: M.E. 56.
Required of students taking Coal Mining.

MODERN LANGUAGES

63. Ore Dressing and Milling.

2 hrs lect., 3 hrs lab. first half.

Specific gravity separations and concentrations, crushers, screens, classifiers, jigs, tables, vanners, etc., amalgamation and cyanidation, flotation, electromagnetic and other dry separators.

Prerequisite: M.E. 52.

Required of students taking Metal Mining and Mining Geology.

64. Mine Design.

3 hrs lab., sec. half.

Layout and plant equipment for a mine, general and detail drawings showing method of running, timbering, shaft station or pit bottom, surface layout, screening plant or concentrating mill, power plant, etc. Report on the mine with estimate of cost.

Prerequisite: M.E. 52. Concurrent with M.E. 59 or M.E. 63.

Required of students taking Coal Mining and Metal Mining.

65. Fuel, Oil, Water and Gas Analysis.

6 hrs lab.

Laboratory work on analysis of Fuels, Oils, Boiler Waters, and Flue Gasses.

Prerequisite: Chem. 55.

Required of students taking Coal Mining.

Graduate Courses.

Courses for degree of Master of Science may be arranged in conference with the head of the department.

DEPARTMENT OF MODERN LANGUAGES

Professor Kerr, Professor Coar, Associate Professor Sonet,
Assistant Professor Pelluet, Mr. Owen, Mr. de Savoye.

Students entering the University wishing to take French or German, but without training in these languages, will enrol in French A or German A as specified below.

UNIVERSITY OF ALBERTA

French

A Introductory French. 3 hrs.

Forms, elementary syntax; oral work; easy prose authors; prose composition.

Text-books: Kerr and Sonet, *French Grammar*; Labiche, *La Poudre aux Yeux*.

Junior Courses.

1. 2 hrs.

Modern French stories such as: Erckmann-Chatrian, *Histoire d'un Conscrit de 1813*; Halévy, *L'abbé Constantin*; About, *Le Roi des Montagnes*.

Prerequisite: Matriculation French or Course A.

Course 1 constitutes with Course 3 the French requirement of the first year.

3. Composition and Conversation. 1 hr.

Text-books: Kerr and Sonet, *French Grammar*, Part II; Pellet, *Thirtyfour Graduated Lessons in French Conversation*. Dictation, composition and oral work based on the authors of Course 1.

Prerequisite: Matriculation French or Course A.

5. 2 hrs.

Modern French stories such as: Mérimée, *Colomba*; Hugo, *Les Misérables*; Maupassant, *Contes*; Coppée, *Pour la Couronne*.

Prerequisite: Grade XII French or Course 1.

Course 5 with Course 4 constitutes the French requirement of the second year.

4. Composition and Conversation. 1 hr.

Text-book: Guerra and Chicoteau, *La Grammaire en Histories* (Dent).

Oral work and dictation based on the authors of Course 2.

Prerequisite: Grade XII French or Course 3.

41. Scientific French. 2 hrs.

(a) Authors. Introduction to the reading of scientific texts.

(b) Composition. Kerr and Sonet, *French Grammar*.

FRENCH

Students entering the Faculties of Applied Science and Medicine deficient in the languages, and who in their first year are taking the A courses, shall be permitted if they pass with second class credit (that is, 65 per cent.), to read the 41 course work during the summer and write it off at the time of the supplemental examinations in September.

42. Scientific French (continuation of French 41) 2 hrs.

(a) Authors. Advanced scientific and general texts.

(b) Composition. Kerr and Sonet, *French Grammar*.

Prerequisite: French 1 and 3 or French 41.

Senior Courses.

51. (a) Eighteenth Century. 2 hrs.

Montesquieu, *De l'esprit des lois*; Le Sage, *Turcaret*; Marivaux, *Comédies*; Voltaire, *Lettres philosophiques*; *Candide*, *L'ingenué* and other selections; *Théâtre*; Rousseau, *La Nouvelle Héloïse*; *Emile*, *Le Contrat Social*; Diderot, *Extracts*; *The Encyclopaedists*; Beaumarchais, *Théâtre*.

(b) Composition and Oral Work. 1 hr.

Text-books: Auger, *Grammaire*; *Certificat d'Etudes*; Mansion, *Histoire de la Littérature Française*.

52. (a) Nineteenth Century. Part 1. 2 hrs.

Chateaubriand, *Atala* and extracts from *Le Génie de Christianisme*; Victor Hugo, *Hernani*, *Notre Dame de Paris*, *Les Misérables*; De Vigny, *Servitude et grands militaires*; Alfred de Musset, *Confessions d'un Enfant du Siècle*; George Sand; Stendhal; A study of the poetry of the period through Berthon's *Specimens of Modern French Verse*; Lamartine, Victor Hugo, de Vigny, de Musset.

(b) Composition and Oral Work. 1 hr.

Text-books: Auger, *Grammaire*; *Certificat d'Etudes*; Mansion, *Histoire de la Littérature Française*.

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- 53. (a) Nineteenth Century. Part 2. 2 hrs.**
Balzac, *Eugenie Grandet*; Sainte-Beuve, *Essays*; Renan, *Souvenirs d'Enfance et Jeunesse*; Taine, *Les Origines de la France contemporaine*; Flaubert, *Mme. Bovary*; Gautier, *Voyage en Espagne*; Mérimée, *Colomba*. Selections from Maupassant and Zola. A study of the Parnassiens and of Baudelaire and Verlaine.
- (b) Composition and Oral Work. 1 hr.**
Text-books: Auger, *Grammaire*; *Certificat d'Etudes*; Mansion, *Histoire de la Littérature Française*.
- 54. (a) French Literature in the XVII Century. 2 hrs.**
Introduction to the literature and thought of the Golden Age; selections from the works of the following authors: Molière, Corneille, Racine, Descartes, Pascal, Larocheffoucauld, Madame de Lafayette, Madame de Sévigné, La Fontaine, Bossuet, La Bruyère.
- (b) Composition and Oral Work. 1 hr.**
Text-books: Auger, *Grammaire*; *Certificat d'Etudes*; Mansion, *Histoire de la Littérature Française*.

Honours Courses.

- 101. Romantic Philology. 1 hr.**
Introduction to historical phonology; reading of old French texts.
Prerequisite: Two of the following courses: 51, 52, 53, 54.
- 102. French Literature. 2 hrs.**
Study in a special field, discussions, reports, theses.
Prerequisite: Two of the following courses: 51, 52, 53, 54.

German.

- A Introductory German. 3 hrs.**
This course will cover the common inflections and the elementary rules of syntax. It aims to give students a reading knowledge of easy German. Oral work and composition based on the authors.

GERMAN

Junior Courses.

1. **Authors.** 2 hrs.
Short stories and plays, oral work.
Prerequisite: Matriculation German or Course A.
Course 1 constitutes with Course 3 the German requirement of the first year.
2. **Authors.** 2 hrs.
Modern German short stories with some reference to their stylistic qualities. Oral work.
Prerequisite: Grade XII or Course 1.
Course 2 constitutes with Course 4 the German requirement of the second year.
3. **Composition.** 1 hr.
Review of German A. Supplementary study of grammatical and syntactical forms. Dictation, composition and oral work based on the authors of Course 1.
4. **Composition.** 1 hr.
Special problems of Grammar and Syntax. Formation of words, etc. Oral work. Composition based on the authors read in Course 2.
Prerequisite: Grade XII or Course 3.
41. **Scientific.** 2 hrs.
Introduction to the reading of scientific texts.
Prerequisite: Matriculation German or Course A.
42. **Scientific.** 2 hrs.
Advanced scientific texts.
Prerequisite: Grade XII or Courses 1 and 3 or 41.
(Not given in 1921-22.)

Senior Courses.

51. 3 hrs.
German life and literature in the nineteenth century prior to the formation of the Empire.
Text-book: Coar's *German Literature in the Nineteenth Century*. Romanticism, Jung Deutschland, Realism, Sentimentalism.
Prerequisite: Courses 2 and 4.
(Not given in 1921-22.)

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52. 3 hrs.

German life and literature in the eighteenth century prior to Goethe and Schiller. Special reference to the influence of English and Romance literatures. Klopstock, Anacreontics, Lessing, Wieland, Herder.

Prerequisite: Courses 2 and 4. (Not given 1921-22.)

53. 3 hrs.

German life and literature in the nineteenth century since the formation of the Empire. Nationalism, naturalism, symbolism.

Text-book: Coar's *German Literature in the Nineteenth Century*.

Prerequisite: Either Course 51 or 52.

54. 3 hrs.

German life and literature from the French Revolution to the Napoleonic wars. Classicism, Goethe and Schiller; Romanticism, Fichte.

Prerequisite: Course 51, or 52, or 53.

Honours Courses.

101. Germanic Philology. 3 hrs.

Middle High German, Historical Grammar; Paul's *Mittelhochdeutsche Grammatik*.

Prerequisite: Two of the following courses: 51, 52, 53, 54.

102. German Literature. 3 hrs.

Study in a special field. Discussions, reports, thesis.

Prerequisite: Two of the following courses: 51, 52, 53, 54.

Graduate Courses.

Graduate students desiring courses in German should consult the head of the department.

PHARMACY

DEPARTMENT OF PATHOLOGY

Professor Ower and Dr. Hall.

Senior Course.

51. **General Pathology.** 3 hrs lect. first half.
1 hr lect., 4 hrs lab. sec. half.

A series of lectures on General Pathology. Laboratory work in Pathologic Histology. A short series of demonstrations of gross specimens. Postmortem examinations. Attendance at one autopsy required of each student.

DEPARTMENT OF PHARMACOLOGY

Professor Downs and Dr. Bell.

Senior Course.

51. 1 hr lect., 2 hrs lab.
The course in Pharmacology consists of lectures, laboratory work and demonstrations. A systematic course of lectures on the physiological action of drugs is given and coordinated with this, practical laboratory work during which the student studies the action of the important drugs.
Text-books: Sollman, Jackson, Bastedo, Meyer and Gottlieb.

DEPARTMENT OF PHARMACY

Professor Gaetz and Mr. Dunn.

Junior Courses.

1. **General and Galenical Pharmacy.** 3 hrs lect.
History and literature; metrology; operations and appliances; preparations, plant constituents.
2. **Prescriptions and Dispensing.** 1 hr lect.
3. **Prescriptions and Dispensing** (for Medical students)
1 hr sec. half.
4. **Practical Pharmacy.** 6 hrs lab.
Concurrent with Pharmacy 1 and 2; general technique; the manufacture of galenicals; typical alkaloidal extractions and assays; dispensing of prescriptions.

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Senior Courses.

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|--|-------------|
| 51. General and Galenical. | 3 hrs lect. |
| 52. Prescriptions and Dispensing. | 1 hr lab. |
| 54. Practical Pharmacy. | 6 hrs lab. |
| 55. Advanced Practical Pharmacy. | 6 hrs lab. |

Chemical methods of identification; determination of purity; analysis and synthesis of medicinal substances. Textbooks: *London Essentials of Pharmacy*; Heebner, *Synopsis of British Pharmacopoeia Preparations*.

Supplementary: Lucas, *Practical Pharmacy*; Arny, *Principles of Pharmacy*; Scoville, *The Art of Compounding*; Ruddiman, *Incompatibilities in Prescriptions*.

DEPARTMENT OF PHILOSOPHY

Professor MacEachran, Assistant Professor Macdonald and
Mr. MacPhee.

Junior Courses.

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|---------------------------------|--------|
| 1. Psychology and Logic. | 3 hrs. |
|---------------------------------|--------|

An introduction to general and experimental psychology and logic. This course is intended to serve as an introduction to advanced psychology and to education. It will involve the following:

- (a) A study of the evolution of consciousness in relation to the evolution of the nervous system.
- (b) An analysis of sensation, perception, imagination, memory, the instincts, the emotions, the sentiments, the unconscious, volition, reasoning, etc.
- (c) The application of psychological and logical methods to the study of the learning processes.

- | | |
|------------------------------|--------|
| 2. Social Psychology. | 3 hrs. |
|------------------------------|--------|

An introduction to social psychology and social anthropology. This course is intended to serve as an introduction to the social and philosophical sciences. It will involve a psychological study of the following:

PHILOSOPHY

- (a) The development of personality in relation to the development of society: the instincts and innate tendencies, the emotions, the sentiments, the unconscious, the growth of self-consciousness, volition, etc.
- (b) Collective behaviour; suggestion, imitation, etc.
- (c) The origin of language, the myth, custom, morality, law, art and religion.

Senior Courses.

- 51. History of Philosophy.** 3 hrs.
The history of thought from the ancients to the present time. In this course special attention will be given to those philosophical and scientific theories which have been most closely related to social, ethical and educational problems.
- 52. English Philosophy.** 3 hrs.
Modern and Contemporary English Philosophy. (Not given 1921-22.)
- 53. Contemporary Philosophy.** 3 hrs.
A study of recent tendencies in Naturalism, Idealism, Pragmatism, Pluralism, Realism and Evolutionism.
- 54. Ethics and Social Morality.** 3 hrs.
A study of the historical development of moral standards in relation to social and economic conditions. This course is intended to familiarize the student with the main aspects of ethical history and theory.

Honours Courses.

Candidates for honours will take courses 51, 52, and 53, but additional reading and essays will be prescribed. In addition, specialized work will be required in one of the following:

- 101. Greek Philosophy.**
- 102. Modern Philosophy.**
- 103 — 107.** One of the following: Logic, Ethics, Aesthetics, Metaphysics, the Philosophy of Religion.

UNIVERSITY OF ALBERTA

Graduate Courses.

Candidates for the degree of M.A. may pursue any of the above Senior Courses not already taken in their undergraduate work. In course 102 candidates doing their major work in Modern Languages may specialize in either Modern French Philosophy or Modern German Philosophy.

Psychology.

Junior Courses.

1. (See Philosophy 1.)
2. (See Philosophy 2.) 3 hrs.

Senior Courses.

51. **Advanced General Psychology.** 3 hrs.
This course will involve a study of the present tendencies in psychology, the theories of consciousness, behaviourism, etc., and will be pursued from a comparative and genetic point of view.
52. **Social and Racial Psychology.** 3 hrs.
An advanced course on the psychological factors in social relations and social development.
53. **Medical Psychology.** 1 hr.
Lectures and selected reading on the following: the instincts, the emotions, the sentiments, volition, habit, personality, the unconscious, suggestion, hypnotism, hysteria, insanity and mental deficiency.
54. **Applied Psychology.** 3 hrs.
Methods employed in the investigation of problems in education, industry, and other practical spheres. In this course special attention will be given to the history, theory and practice of mental measurement.

Honours Courses.

Candidates for honours will take courses 51, 52, and 54, but additional reading and essays or practical work will be prescribed. In addition, specialized work will be required in one of the following:

PHYSICS

- 101. Physiological Psychology.
- 102. Abnormal Psychology.
- 103. The Psychology of Religion.
- 104. Experimental Psychology.
- 105. Educational Psychology.

Graduate Courses.

Candidates for the M.A. degree may pursue any of the above senior courses not already taken as undergraduate work.

Education.

- 51. History and Philosophy of Education. 3 hrs.
- 52. Experimental Education. 3 hrs.

DEPARTMENT OF PHYSICS

Professor Boyle, Associate Professor Smith, Associate Professor MacLeod, Mr. Lang, Mr. Morgan, Mr. Lehmann.
and

Junior Courses.

1. (a) General Elementary Physics.

3 hrs lect., 3 hrs lab.

Including the more important principles of mechanics, properties of matter, heat, sound, light, magnetism, and electricity. Illustrated by experiments.

For first year Arts and Sciences, Household Economics, and the Degree Course in Pharmacy.

(b) The same as 1 (a), but more advanced.

Text-book: Kimball's *College Physics*.

- 11. General Elementary Physics. 3 hrs lect., 3 hrs lab.
The same range as in Course 1, but for, and more particularly applied to, students of first year Medicine.
- 21. The same: For first year students of Dentistry and Pharmacy.
Text-book: Kimball's *College Physics*.

UNIVERSITY OF ALBERTA

31. General Elementary Physics.

3 hrs. lect., 3 hrs. lab.

Range more restricted than Courses 1 and 2, and more particularly applied to students of first year Agriculture.

Text-book: Carhart & Chute, *Physics with Applications*.

3. (a) Properties of Matter, Molecular Mechanics, and Heat.

3 hrs. lect., 3 hrs. lab., first half.

(b) Sound and Light.

3 hrs. lect., 3 hrs. lab., sec. half.

Text-books: Duncan & Starling, *Text-book of Physics*, Allan & Moore, *Text-book of Practical Physics*.

For first year Engineering students, and second year, or well prepared first year, students of Arts and Sciences. Illustrated by experiments.

6. Magnetism and Electricity.

3 hrs. lect., 3 hrs. lab.

A course prerequisite to more advanced courses in electrical physics and in electrical engineering. Illustrated by experiments. For second year Engineering students and second year students of Arts and Sciences.

Text-books: Brooks & Poyzer, *Magnetism and Electricity*; Allan & Moore, *Text-book of Practical Physics*.

8. General Physics, Selected Topics (if required).

3 hrs lect., 3 hrs lab.

Introductory to the work of senior and honours classes. For second year Arts and Sciences.

12. Optics and Radiation.

3 hrs lect., 3 hrs lab.

More advanced than the same subjects in Courses 1 and 3(b), and introductory to the work of senior and honours classes. Illustrated by experiments. For second year Arts and Sciences.

Text-book: Edser's *Light for Students*.

Senior Courses.

For the year 1921-22, Physics 6, 8, and 12 may be taken as senior courses but not for honours.

PHYSIOLOGY

- 51. Physical Optics.** 3 hrs lect., 3 hrs lab.
A course on Wave Theory, dealing especially with interference, diffraction, polarisation, double refraction, and spectroscopy.
Reference books: Houston, *Treatise on Light*; Preston, *Theory of Light*; Wood, *Physical Optics*.
- 53. Electrical Physics.** 3 hrs. lect., 3 hrs. lab.
Of direct and alternating current circuits, electrical and magnetic testing, precision electrical measurements, principles of electric waves.
Text-book: Starling, *Electricity and Magnetism*.
- 54. A Course on Special Selected Topics.** (If required.)
3 hrs. lect., 3 hrs. lab.
- 57. Introduction to Mathematical Physics.**
3 hrs. lect., 3 hrs. lab.
Text-book: Houston, *Introduction to Mathematical Physics*.

Honours Courses.

- 101. Modern Atomic Physics Theory.**
3 hrs. lect., 6 hrs. lab.
Honours courses may also be chosen from the senior courses by arrangement with the department.

DEPARTMENT OF PHYSIOLOGY AND BIOCHEMISTRY.

Professor Downs, Associate Professor Collip, Assistant Professor Eddy, Dr. Bell, and Demonstrators.

Physiology

The work of this department extends through two years and comprises lectures, laboratory work, demonstrations and conferences.

Junior Course.

- 1.** 3 hrs lect., 3 hrs lab.
The physiological phenomena of the heart and circulation, digestion, absorption, assimilation, excretion and respiration are studied in detail.

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Senior Courses.

- 51.** 3 hrs lect., 3 hrs lab.
Lectures and laboratory work on animal heat, secretion (external and internal), muscle, nerve, central nervous system and special senses constitute the senior courses.
Text-books: Burton-Opitz, Halliburton, Stewart, Howell.
Reference books: Sherrington, Macleod, Carlson, Wiggers, Starling.

- 61. Physiology.**
Same subject matter as Physiology 1. A senior subject open to students in Arts and Sciences.

Research.

The laboratory is always open to those who are qualified to undertake investigations in the domain of physiology. For particulars apply to the head of the department.

Biochemistry

Junior Course.

- 1. Elementary Biochemistry.** 3 hrs lect., 4 hrs lab.
Physical and chemical principles forming basis for general physiology; chemistry of food and proximate physiological compounds; enzyme action; digestion; metabolism; diet; nutrition; calorimetry; chemistry of physiological fluids, blood, urine, sweat, milk.

Senior Courses.

- 51. Pathological Chemistry.** 1 hr lect., 2 hrs lab.
Detailed study of the chemistry of body fluids and tissues in health and disease; hydrogen ion and its significance; acidosis; alkalosis.
- 61. Biochemistry.**
Same subject matter as Biochemistry 1. A senior subject open to students in Arts, Household Economics, and the degree course in Pharmacy.

POLITICAL ECONOMY

DEPARTMENT OF POLITICAL ECONOMY

Professor MacGibbon and Mr. McGoun.

Junior Courses.

1. **Principles of Economics.** 3 hrs.
A general introduction to the study of Political Economy. In this course there will be two lectures a week and the class will be divided into quiz groups for the third hour.
Text-books: Gide, *Political Economy*; Smart, *An Introduction to the Theory of Value*. Assigned readings.
2. **Elements of Political Economy.** 2 hrs. first half.
A brief introductory course open only to students registered in the Faculties of Agriculture and Applied Science.
Text-books: Clay, *Economics for the General Reader*.
10. **Economic Geography.** 2 hrs sec. half.
A study of production and trade as influenced by geographic conditions. The geography of the more important commercial products; continental and oceanic trade routes; great commercial centres.

Senior Courses.

63. **Political Science.** 3 hrs.
The origin, nature, function, and organization of the state. (Not given 1921-22.)
64. **Trade and Transportation.** 3 hrs.
International trade, economic protectionism, international commercial policies, tariffs, transportation as a factor in international trade.
65. **Labor and Industrial Problems.** 3 hrs.
The genesis of labor problems, the wage system, labor legislation, unemployment, agencies of industrial peace, scientific management, unionism, syndicalism.
66. **Currency, Banking and Finance.** 3 hrs.
The principles of money, monetary systems, commercial and investment banking, corporation finance. (Not given 1921-22.)

UNIVERSITY OF ALBERTA

- 67. Public Finance and Taxation.** 3 hrs.
Public expenditures, budgets and budgetary legislation, public domains and public industries, taxation, public credit, provincial and local taxation. (Not given 1921-22.)
- 68. Problems in Labor Management.** 2 hrs sec. half.
Labor maintenance, scientific management, welfare institutions, strikes, methods of industrial peace, labor legislation, unionism.
Prerequisite: Course 2. (Not given 1921-22.)
- 69. Corporation Finance.** 1 hr sec. half.
The nature of corporations, their promotion, capitalization, financing, reorganization; holding companies; franchises; the taxation of corporations, business law.
Prerequisite: Course 2.
- 70. An introduction to Agricultural Economics.** 2 hrs sec. half.
Special emphasis upon the problems of rural credits, marketing, co-operative organization and tenancy.
Prerequisite: Course 2.

Honours Courses.

- 101. History of Economic Theory.**
From the Mercantilists to the end of the 19th century.
- 102. American Economic Theories.** 3 hrs.
A critical examination of modern economic thought. (Not given 1921-22.)

DEPARTMENT OF POULTRY

Assistant Professor Bergey.

Senior Courses.

- 51.** 1 hr lect., 2 hrs lab. first half.
Study of classification of the modern breeds, their origin and description; principles of poultry breeding and selection of stock; different farm systems of poultry keeping, housing and house construction; common poultry feeds and methods of feeding, incubation and brooding both artificial and natural and candling eggs, capons and caponizing; diseases and parasites of fowls.
Text-book: *Poultry Husbandry*, H. R. Lewis.

SOILS

- 52.** 1 hr lect., 1 hr lab.
Origin of domestic breeds, advanced poultry breeding, nutriment and digestion and the compounding of rations, incubation, record of performance, grading of commercial eggs, culling work, judging of fowls for exhibition and egg production, experimental work and marketing problems.
Text-book: *Poultry Husbandry*, H. R. Lewis.

DEPARTMENT OF SOILS

Dr. Wyatt.

Junior Courses.

- 1. Soil Physics and Management.** 2 hrs lect., 4 hrs lab. first half.
Origin of soil material; formation; classification; constituents, organic matter; moisture and its control; aeration; temperature; erosion; tillage of dry and irrigated lands; rotations.
Text-book: *Soil Physics and Management*, Moshier and Gustafson.
- 2. Soil Fertility and Fertilizers.** 2 hrs lect., 4 hrs lab. sec. half.
Yields as affected by fertility, rotations and different systems of farming; composition and management of Canadian soils; composition and value of manures and fertilizers.
Text-book: *Soil Fertility and Permanent Agriculture*, Hopkins.

Senior Courses.

- 53. Advanced Fertility.** 2 hrs lect., 4 hrs lab. first half.
Special work with soils in which the student is interested; pot culture experiments; systematic study of investigational work from various experiment stations.
- 54. Soil Bacteriology.** 2 hrs lect., 3 hrs lab. sec. half.
Soil micro-organisms and factors influencing their activity; decomposition of crop residues and manures; nitrogen fixation and preservation; effect on insoluble plant foods.
- 55. Irrigation and Drainage.** 2 hrs lect. sec. half.
Character of water used for irrigation; time and amount of application; measurement and distribution; duty; removal of excess; control of alkali.

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DEPARTMENT OF SURGERY

Dr. Gray, Dr. Wilson and Dr. Munroe.

Senior Course.

51. **Surgery.** 1 hr lect., 2 hrs clin.
Principles of surgery; clinical instruction in inflammatory processes, sepsis, haemorrhage, hernia, surgical landmarks, history taking, wounds, fractures, bandaging.

TOXICOLOGY

Professor Gaetz and Mr. Dunn.

Junior Course.

1. **General.** 1 hr first half.
The nature and properties of poisons, their detection, and the application of "first aid" treatment.

DEPARTMENT OF VETERINARY SCIENCE

Dr. Talbot (special Lecturer).

Junior Courses.

1. **Elementary Agricultural Veterinary Science.** 1 hr lect.
Anatomy, physiology, materia medica.
2. **Agricultural Veterinary Science.** 1 hr lect.
Medicine and surgery parasitology, obstetrics.

Senior Course.

51. **Advanced Agricultural Veterinary Science.**

DEPARTMENT OF ZOOLOGY

Associate Professor Rowan, Miss Pelluet.

Junior Course.

1. **General Elementary Zoology (Arts)**
2 hrs lect., 4 hrs lab.
Vertebrate and invertebrate types; histology; heredity, variation and evolution.

PHYSICAL EDUCATION

2. **General Elementary Zoology (Medicine).**
2 hrs lect., 4 hrs lab.
Frog and other types; protozoa; histology; heredity, variation and evolution; mammalian skull, brain and heart.
3. **Elementary Embryology (Second Year Medicine).**
2 hrs lect., 4 hrs lab. first half.
Embryology of the frog, and chick to 48 hours; other selected types.
4. **Economic Entomology.**
2 hrs lect., 2 hrs lab. sec. half.
(Not given 1921-22.)

DEPARTMENT OF PHYSICAL EDUCATION

.....
Director

.....
Assistant Director.

The aim of the department is to contribute to health, organic vigour, and good physical habits, by providing an opportunity for every student to secure, under proper regulations, sufficient exercise as a balance to the sedentary demands of university life, and to conserve the social and moral values of athletic games and sports. Work in this department is compulsory upon all students of the first and second years. At the beginning of each session there is a physical and medical examination of all students of these two years. Further, all candidates for teams in athletic sports must submit to a medical examination to determine their physical fitness to engage in such sports. The examination for men is conducted by the Director of Physical Education and the Director of Medical Services of the University, and the examination for women by the Assistant Director and the Director of Medical Services of the University. No other certificates are accepted.

- Course 1. First Year.** 3 hrs.
Physical and medical examination; instruction and recreation to meet the physical requirements of the student at the beginning of the university course; exercise and practice in the fundamentals of athletic games, mass athletics, gymnasium class work.

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Course 2. Second Year.

3 hrs.

Physical and medical examination; instruction and practice based on the work of Course 1, but of a more advanced nature.

Considerable latitude is allowed each student in choosing the form of exercise to be taken, the main factors governing the selection being: suitability of the exercise, physical condition of the individual, effective supervision, and regular participation. The Department, governed by the result of the physical and medical examination, reserves the right to veto the student's choice.

DEPARTMENT OF EXTENSION

Director, Albert Edward Ottewell, M.A.

Secretary of the Department, Edward Armand Corbett, M.A.

Extension Librarian, Jessie Fleming Montgomery, B.A.

Lecturers, Harold S. Paton, B. A., and

This department is organized to help those unable to attend regular university classes, and carries on work along the following lines:

Extension Lectures.

A limited number of extension lectures on various subjects may be arranged in conference with the Director of the Department of Extension.

Division of Debating and Public Discussion.

Outlines are published for the assistance of debaters and material on subjects of debates is lent by the University. This material is available to all residents of Alberta free of charge. To applicants from points outside of the Province a charge of fifty cents is made for each package lent.

Material for debate has been prepared on the following subjects: Canadian Navy; Capital Punishment; Closed versus Open Shop; Co-education; Commission Government of Cities; Compulsory Military Service in Canada; Compulsory Military Training in Canada; Compulsory Social Insur-

DEPARTMENT OF EXTENSION

ance; Consolidated Rural Schools; Co-operative Banking; Co-operative Trading; Direct Legislation; Educational Qualification for Suffrage; Gary School Plan; Government Ownership of Railroads; Heredity versus Environment; Home Rule for Ireland; Imperial Federation; League of Nations; Literary Test for Immigrants; Military Training in Schools; Minimum Wage; Monroe Doctrine; Mothers' Pensions; Motion Pictures in Education, Place of; Municipal Ownership of Public Utilities; Oriental Immigration; Parliamentary versus Presidential Form of Government; Peace versus War; Platform versus Press; Prohibition; Proportional Representation; Protection versus Free Trade; Public Defender; Reciprocity with the United States; Rural versus City Life; Simplified Spelling; Single Tax; Socialism; Tractor versus Horse; Trade Unions; Woman Suffrage; Canadian Tariff; School Curriculum; Limitation of Inheritance.

The Department has also in course of preparation debating material on the following subjects: National System of Education; Control of Natural Resources; Equal Pay for Equal Work; Trial by Jury; Suspension of Immigration into Canada for Five Years, except British Subjects and Citizens of the United States.

In addition, material has been provided on a large number of other subjects. A manual of instruction for debaters is also available.

In connection with this division a High School Debating League is organized year by year. Each year a large number of the high schools of the province has entered the league.

Division of Travelling Libraries.

Travelling libraries are lent to communities where no public libraries exist. For this purpose over 10,000 volumes are at present available. During the present session two hundred and thirteen libraries have been in circulation. A special feature of this service is the open shelf list from which students may borrow individual volumes. A printed catalogue is supplied to would-be borrowers for twenty-five cents.

The Department also offers assistance to those who wish to do systematic reading in a particular field, literature, science, history, politics, sociology, etc. With the help of members of the University Faculty outlines on the desired subject will be prepared and reference books will be furnished from the open shelf library.

UNIVERSITY OF ALBERTA

Division of Visual Instruction.

This division consists of:

A. Lantern Slide Service. The department has a lantern slide library of about one hundred and fifty sets of lantern slides, to which additions are continually made, accompanied by printed or typewritten lectures, as well as over one thousand miscellaneous slides. Payment of express charges and the making good of loss or breakage is the only expense for this service. A list of lantern slide sets may be had on application.

B. Moving Picture Service. The system of moving pictures adopted and recommended by the Department of Extension is the Safety Standard, utilizing a practically non-inflammable film, and consequently free from insurance and other restrictions. Machines can be purchased from the Department at the lowest possible price. The Pathescope is for use in small schools and is equipped with a generator turned by hand. The Victor Safety Cinema operates successfully in larger halls up to 100 feet from the screen. It can be furnished for use, on 110 volt circuit, with Delco or other low voltage plant, or with twelve volt storage battery. Except in the latter case, motor drive is available. Film service is provided on a rental basis sufficient to take care of handling and depreciation, particulars of which will be furnished on request.

Any further information will be furnished upon application to, The Department of Extension, University of Alberta, Edmonton, Alberta.

INDUSTRIAL LABORATORIES

James Alexander Kelso, M.Sc. (Queen's),
Director.

Cyprian Herbert Andrews, B.A. (Saskatchewan),
Assistant.

The Department of Industrial Laboratories operate fully equipped Chemical, Physical, Assay, Coal, Cement and Concrete Laboratories, etc., for the carrying out of all tests on materials. Investigations for the industries and for the development of the natural resources can be undertaken.

For complete information and schedule of fees apply to the Director.

CORRESPONDENCE COURSES

DEPARTMENT OF CORRESPONDENCE COURSES

Duncan Stewart MacKenzie, Director of 'Teachers' Courses.

Janet M. McBratney, Instructor in English and Languages.

Annie Norrington, B.Sc. (Manitoba), Instructor in Science and History.

Mrs. E. T. Mitchell, M.Sc., Instructor in Mathematics.

The Correspondence Department offers instruction in the work of Grade XII as laid down by the Provincial Department of Education. The object of the work is to encourage teachers who hold the Second Class certificate to pursue further academic study in preparation for the Grade XII examination. The successful completion of the Grade XII course while giving the required academic standing for First Class certificate, will also give standing pro tanto for first year University courses.

Teachers who contemplate a University course and who have not taken languages in the earlier High School grades should first attend at least one Summer School session and devote their whole time to such languages.

Affiliated Colleges

ALBERTA COLLEGE SOUTH Theological College of the Methodist Church.

Government.

The management and direction of Alberta College are vested in a Board of Governors appointed every four years by the General Conference of the Methodist Church and incorporated by Act of Parliament.

The officers of the Board are:

Chairman—H. R. Smith, M.D.

Secretary—C. E. Race, B.A., C.A.

Treasurer—W. T. Henry, Esq.

Executive Committee—H. R. Smith, M.D.; C. E. Race, B.A., C.A.; W. T. Henry; Rev. A. R. Aldridge, B.A.; C. G. Corneille, B.A.; Rev. T. C. Buchanan, D.D.; H. H. Crawford, M.L.A.; A. T. Cushing, B.A.; J. F. Fowler; Rev. F. S. McCall, B.A.; C. F. Newell, K.C.; James Ramsey, M.L.A.; Rev. R. L. McTavish; Rev. A. S. Tuttle, M.A., D.D.

Faculty.

Rev. A. S. Tuttle, M.A., D.D. (Mt. Allison),
Principal, Professor of Philosophy of Religion.

Rev. A. D. Miller, M.A. (Toronto), B.D. (Victoria),
Professor of Old Testament Languages and Literature.

Rev. Cloy Jackson, M.A. (Toronto), B.D. (Victoria),
Professor of New Testament Literature.

Miss Nettie Burkholder, B.A. (Victoria),
Lady Principal, Lecturer in Sciences.

Rev. S. R. Laycock, B.A. (Toronto), M.A., B.D. (Alberta),
Lecturer in Classics, and Religious Education.

Mrs. Annie E. Race, B.A. (Toronto),
Lecturer in French and History.

(To be appointed),

Lecturer in Mathematics.

(To be appointed),

Lecturer in Elocution and Oratory.

Mr. Herbert Lawrence,

Registrar.

AFFILIATED COLLEGES

Courses of Study.

Preparatory. Thorough courses of instruction are given in all subjects leading to matriculation into the University of Alberta, and to the Departmental Examinations in Grades X and XI, for teachers. These studies are also required for entrance upon the study of Theology.

Theological. (a) **Ordinary:** A three-year course of study in Theological branches including certain required and optional subjects in Arts in the University of Alberta. The Diploma of the College is conferred upon the completion of this course.

(b) **Graduates':** A more exacting course designed for those who have completed an Arts course before entering upon the study of Theology.

(c) **Degree Course:** Additional studies leading to the Degree of Bachelor of Divinity, conferred by the University of Alberta.

(d) A special one-year's course for Christian workers.

All Theological courses in Alberta College are open to students of other denominations with no discrimination.

Residence.

The College has one of the best residence buildings in Canada, capable of housing about 125 students, located on University grounds in a most fortunate relation to the University community.

During the last two years there has been a large increase in the number of students in the matriculation department. This department offers an especially good opportunity to those who must make up one or two subjects to gain full matriculation, as these may be carried in addition to University subjects, and thus time saved.

ROBERTSON COLLEGE.

Theological College of the Presbyterian Church.

This college was placed by action of the General Assembly of 1910 in connection with the Provincial University. The name, "Robertson College", was decided upon October 10th, 1911, to perpetuate the memory of the pioneer missionary Superintendent of Western Canada, the Rev. James Robertson, D.D.

UNIVERSITY OF ALBERTA

Government.

The management and direction of Robertson College are vested in a Board of Management and Senate, appointed annually by the General Assembly, of which the following are the officers:

Board of Management.

Chairman—(pro tem) Rev. D. G. McQueen, M.A., D.D.
Edmonton.

Vice-Chairman—R. J. Hutchings, Esq., Calgary.

Secretary—Hugh C. Anderson, Esq., Edmonton.

Treasurer—A. F. Ewing, Esq., B.A., K.C. M.L.A.,
Edmonton.

Assistant Treasurer—Rev. H. G. Rice, M.A., B.D.,
Edmonton.

Senate.

Chairman—Principal J. M. Millar, D.D.

Faculty for 1921-22.

Rev. J. M. Millar, M.A., B.D., D.D.,
Principal,

Professor of English Bible, and Religious Education.

Rev. A. T. Barnard, M.A., B.D.,
Head of Extra-Mural Department; Lecturer in Church History.

.....
Professor of Systematic Theology.

And the following professors of Alberta College:

Rev. A. S. Tuttle, M.A., D.D.,
Philosophy of Religion.

Rev. Cloy Jackson, M.A.,
Professor of New Testament Literature.

Rev. A. D. Miller, M.A., B.D.,
Professor of Old Testament Literature.

Rev. S. A. Laycock, M.A., B.D.,
Department of Religious Education.

AFFILIATED COLLEGES

Course in Theology.

The ordinary curriculum of study for the ministry of the Presbyterian Church demands the B.A. Degree (including Greek and Hebrew), and three years in Theology. Any course which does not include the B.A. Degree must be reported to the Board of Education of the Church.

Co-operation in Instruction.

The plan for co-operation in instruction is carried on by Robertson and Alberta Colleges with very gratifying results.

Courses for the Degree of B. D.

The degree of B.D. is granted by the University. The courses are given in the affiliated theological colleges and approved by the University. For information as to subjects of study, text-books, fees, etc., apply to Mr. C. E. Race, B.A., C.A., Registrar of the University.

The Degree of D.D.

The degree of Doctor of Divinity is conferred "honoris causa".

Extra-Mural Department.

During the session 1920-21 five non-resident students were registered in this department. Information about the various courses will be sent upon application to Professor A. T. Barnard. The courses are arranged to suit the needs of men who cannot attend college, and students receive individual attention.

Library..

The library contains 4,000 volumes and is available for students, missionaries, missionary societies and ministers.

Residences.

Robertson College occupies at present a residential block in Edmonton South, purchased by the Board of Management and furnished by the efforts of the Women's Guild. Application for rooms for the session of 1921-22 should be made at once to Principal J. M. Millar, who should also be communicated with by those desiring calendars containing complete information about Robertson College.

During the session 1920-21 the number of students registered was twenty. Seven men graduated in Theology at the Spring Convocation of 1921.

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ST. AIDAN'S COLLEGE.

This college, operating under the authority of the Synod of the Anglican Diocese of Edmonton, was affiliated with the Provincial University, by resolution of the Senate, May 15, 1919.

Information regarding courses may be obtained on application to the Warden, the Right Reverend Henry Allen Gray, M.A., D.D., LL.D., Bishop of Edmonton.

AFFILIATED PREPARATORY SCHOOLS.

Under the regulations of the Senate, preparatory schools and colleges which send students to the University Matriculation Examinations are affiliated with University.

Under this arrangement the following are affiliated institutions:

Western Canada College, Calgary.

Alberta College, Edmonton.

Mount Royal College, Calgary.

The University School, Calgary.

Alberta College (North), Edmonton.

Llanarthney School for Girls, Edmonton.

Westminster Ladies' College, Edmonton.

Students of the University of Alberta

SESSION 1920-21.

A—Faculty of Arts and Sciences; S—Faculty of Applied Science; Ag sp—Five Months' course in Agriculture for returned soldiers; Arch—Architecture; Corr—Correspondence, Grade XII; D—Divinity; HEc—Household Economics; L—Faculty of Law; M—Faculty of Medicine; PhmL—Licentiate Course, Pharmacy; PhmL 1-yr—One-Year Licentiate Course, Pharmacy; PhmD—Degree Course, Pharmacy; Dent—Dentistry; SS—Summer School; PHN—Course in Public Health for Nurses.

c—conditioned student; p—partial student; sp—special student; grad—graduate student. The numbers refer to the year.

Adam, Jas. D. A L 3
 Agnew, Alec. M. M 1
 Agnew, T. J. PhmL 1
 Ahenakew, E. M 2
 Alexander, N. E. c M 2
 Alfred, V. L 2
 Allan, D. H. A 2
 Allison, H. K. c A 1
 Allison, Wm. S. c M 1
 Allwork, C. T. A 3
 Anderson, Miss A. R. A 4
 Anderson, E. H. Grad A
 Anderson, Miss M. Corr
 Anderson, R. L. M 2
 Andrews, C. H. M 3
 Appleton, H. R. Grad A
 Archibald, Miss M. C. A 3
 Armstrong, Miss H. St. C. HEc 2
 Armstrong, R. R. S 1
 Armstrong, W. S. S. M 2
 Atkin, G. D. L 4
 Atkinson, N. H. S 3
 Austin, Miss E. c A 1
 Austin, Miss S. H. c A 1
 Aylwin, A. P. c A 2
 Bainbridge, J. W. A 4
 Bainbridge, S. A 4
 Baker, A. G. c L 2
 Baker, H. M. Ag 1
 Baker, R. M. c A 1
 Baker, W. E. M 2
 Bakewell, Miss E. G. A 4
 Balaam, Miss R. V. c A 2
 Ball, J. E. sp A 3
 Ballantyne, Miss J. M. A 2
 Banks, C. W. A m 4
 Barclay, F. W. c A L 1
 Barclay, Miss H. K. M. Grad L 4
 Bard, Miss G. c HEc 1
 Barker, Miss L. c A 2
 Barnecut, R. S 3
 Barnes, S. Ag 3
 Barnett, C. V. c A 1
 Barnett, R. A. c A 1
 Basarab, J. E. c L 3

Bayfield, E. G. Ag 1
 Bayly, M. D. D
 Becker, C. M. PhmL 1
 Becker, Miss R. c PhmD 1
 Beiswanger, C. E. A 1
 Belcher, Miss A. M. P H N
 Bell, E. R. c A 2
 Bell, W. W. M 3
 Benedict, E. E. c M 1
 Bennett, Miss M. V. PhmD 3
 Benson, Miss M. C. Corr
 Berchmans, Sr., M. Corr
 Bercov, Aaron M 2
 Bercov, Abraham L 1
 Berman, D. A M 4
 Bertles, H. PhmL 2
 Beveridge, Miss B. A 3
 Bickell, Miss J. M. c A 2
 Binet, J. F. Dent 1
 Biraud, F. P. Ag 1
 Bird, O. M. c M 1
 Bissell, Miss I. B. A 4
 Black, Miss L. Y. A L 3
 Blackmore, J. H. Grad A
 Blain, L. K. A L 4
 Blair, W. M. Dent 1
 Blow, Miss W. E. A 4
 Bosomworth, H. Grad A
 Botsford, Miss N. Corr SS 1
 Bowlen, J. J. M 1
 Bowles, N. G. Corr
 Bowman, M. W. Dent 1
 Boykowich, M. c Dent 1
 Boyle, H. A. M 2
 Boyle, Mrs. W. W. c A 1
 Boynton, P. sp A 2
 Boytzun, Wm. PhmL 1
 Bradford, Miss M. A 2
 Bradley, R. W. Dent 2
 Bramley-Moore, A. G. A L 2
 Bramley-Moore, Miss L. c A 1
 Brayton, M. J. M 2
 Brent, Miss L. M. Corr
 Briggs, F. I. Ag 1
 Brimston, Miss M. G. PhmL 1

UNIVERSITY OF ALBERTA

Broadus, K. H. A 3
 Brooks, O. G. SS 1
 Brown, Miss A. c HEc 1
 Brown, Jas. A L 2
 Brown, K. F. sp A 1
 Brown, W. R. Ag 1
 Brown, Miss B. J. SS 1
 Brownlee, Miss E. A 2
 Brunton, J. F. M 1
 Bryan, G. J. A L 2
 Bryan, Miss H. A. A 3
 Bryden, R. B. S 3
 Buchanan, J. E. Grad A
 Buckingham, E. H. Ag 3
 Budd, W. S. A L 4
 Bullock, J. T. c A M 2
 Bures, A. J. c A 2
 Burgess, Miss A. M. c M 1
 Burgess, W. D. c S 2
 Burley, A. E. L 4
 Burns, S. Ag sp
 Bushfield, H. S. S 1
 Buster, Miss L. H. Corr
 Butchart, E. L. c L 1
 Butchart, H. T. S 3
 Butchart, Miss T. V. A 3
 Byers, Miss A. L. S S 1
 Byers, J. N. C. c M 1
 Cain, Miss A. R. A 3
 Cain, Miss P. U. A 3
 Cavin, S. A. Ag 1
 Caldwell, Miss O. J. c A 1
 Cameron, J. A. S 1
 Cameron, R. A. A 2
 Campbell, W. P. A 2
 Cannon, H. F. M 2
 Card, G. Grad. A
 Carmichael, Miss B. HEc 2
 Carmichael, H. p S 2
 Carmichael, Miss M. c A 1
 Carruthers, W. C. p Dent 1
 Carter, V. E. PhmL 1
 Carter W. SS 1 & c A 2
 Cartwright, H. D. Grad A
 Cassels, W. H. M 1
 Caswell, Miss E. c M 1
 Cathro, Miss H. T. A 2
 Chadsey, L. C. A M 4
 Chalmers, Miss H. H. c A 2
 Chapman, R. Corr
 Charlesworth, Miss D. A 1
 Charlesworth, G. S. A M 1
 Chestnut, O. W. M 3
 Chrisnop, N. S. c L 1
 Christie, Miss C. M 2
 Christie, Miss P. C. p M 1
 Chrystal, Miss C. A 4
 Church, Miss E. E. A 1
 Churchill, E. L. A Ag 2
 Clark, Miss C. K. C A 1
 Clark, G. H. Grad A
 Clark, J. G. Ag 3
 Clarke, A. E. A Ag 1
 Clarke, P. D. Corr
 Clarke, Thos. c A L 1
 Cleland, R. H. c S 2
 Cobb, Miss L. Grad A
 Cobbledick, D. W. L 3
 Cobbledick, L. H. A 4
 Cole, Miss M. SS 1
 Collinge, T. W. c L 2
 Collins, Sr. G. E. SS 1 & Corr
 Condor, J. F. Ag sp

Connor, H. E. c A 1
 Conrod, J. R. c Dent 1
 Conroy, Miss A. L. P H N
 Cooke, Miss A. E. A 4
 Cooke, F. sp A 3
 Cook, Miss J. McL. HEc 1
 Coons, K. McK. c Dent 1
 Cooper, V. H. A M 2
 Copeland, E. R. P. PhmD 3
 Corrigan, Miss V. R. Corr
 Cory, W. A. PhmL 2
 Cosens, T. C. SS 1
 Costigan, G. A. L 3
 Cousins, F. C. A L 3
 Cowan, Miss K. S. A 4
 Cox, Miss A. K. S 1
 Craig, K. L. M 3
 Crawford, A. M. M 2
 Crawford, D. J. McG. c M 1
 Crawford, W. A. c M 1
 Creamer, J. H. R. Ag sp
 Criley, Miss A. M. Grad
 Crockford, M. B. B. A L 2
 Croisetiere, J. A. c M 1
 Crooks, G. C. PhmL 1
 Crosby, G. S. C. L 3
 Cross, E. A L 1
 Cross, J. S. Ag 1
 Crowley, Miss M. A. Corr
 Cundal, K. S. A S 2
 Curtin, Miss F. HEc 2
 Curtin, Miss G. M. L 2
 Curtin, Miss K. T L 2
 Dain, E. W. c A 2
 Dake, Miss B. I. A 4
 Dalz, F. J. A. Dent 2
 Dane, K. L. c S 1
 Davidson, J. R. A 4
 Davidson, Miss M. C. R. Arch 2
 Davies, J. H. L 2
 Davies, S. sp A 3
 Davis, Miss E. Corr
 Dawson, G. S. c S 2
 Dawson, H. R. L 3
 Denny, C. D. Corr
 De Turbeville, Miss G. P H N
 Devereaux, Miss H. A. sp A 1
 Dick, Miss A. F. Corr
 Dickinson, F. C. L 2
 Dier, H. H. M 2
 Diller, Miss D. A 3
 Dingwall, A. Ag 1
 Doak, J. K. R. Ag 1
 Dobry, Miss A. C. A L 4
 Dobry, J. J. c M 1
 Donaldson, A. S 3
 Dorrance, F. S. M 2
 Doughty, J. L. Ag 3
 Douglas, R. G. M 2
 Douglas, W. S. sp A 2
 Dowling, H. E. M 2
 Drake, W. R. c A 1
 Drake, W. V. A 3
 Draper, Miss J. E. Corr
 Dreyer, J. Ag sp
 Drinnan, R. G. c A 1
 Driscoll, Miss A. A 1
 Druitt, C. J. sp A 1
 Drummond, G. PhmL 1
 Duclos, Miss G. F. A 2
 Duff, Miss S. M. G. L 1
 Duggan, K. P. A 1
 Duke, Miss M. c A 1

STUDENTS

Duncan, J. E. sp S 3
Dunkley, F. R. A 2
Dunnet, Miss M. S. Corr
Dyer, T. M. M 3
Eadie, W. W. M 2
Ebbot, A. H. SS 1
Edlund, A. E. PhmL 1
Edmonds, D. E. A 1
Edwards, C. A. A L 2
Edwards, C. G. A S 3
Edwards, E. W. c Dent 1
Edwards, H. E. PhmL 1
Edwards, Miss H. S. Grad
Edwards, M. J. L 2
Edwards, W. H. SS 1
Edworthy, S. A 3
Einaron, G. A 4
Elford, Miss M. A. Corr
Elliott, R. H. Ag 1
Emerson, Miss B. A. P H N
Emery, Miss R. sp A 1
Emery, H. R. L 2
Esdale, W. C. Ag 1
Ethridge, F. M. S 1
Eubank, Miss E. M. c A 2
Evans, R. W. A 3
Ewing, Miss M. C. Corr
Falconer, R. L. p Dent 1
Fane, F. J. W. c M 1
Fanjoy, W. T. S 1
Ferguson, F. H. S 1
Ferguson, G. V. A 3
Ferguson, Mrs. R. L 2
Fergusson, Miss K. Grad
Fergusson, Miss L. M. A 3
Fetter, R. E. A S 3
Fewings, F. G. R. c A 1
Fife, J. K. M. M 2
Findlay, Miss M. I. S. c M 1
Firkins, N. E. A 1
Fisher, F. S. p S 2
Fisher, H. SS 1
Fisher, H. A 3
Fisher, Miss H. M. L 3
Fitzsimmons, R. D. A L 4
Flack, C. R. Corr
Flack, S. G. c A S 2
Fleming, W. M. Grad
Fletcher, T. Corr
Forbes, J. Ag sp
Forbes-Reid, Miss M. sp A 3
Ford, F. A. A L 3
Fowler, Miss M. Grad
Frame, W. E. A 3
Francis, A. C. A 4
Fraser, A. A. S 2
Fraser, Miss I. B. A 2
Fraser, Miss L. M. HEc 4
Fraser, S. D. c S 1
Fuller, G. F. L 1
Fulmer, F. D. M 2
Fuog, Miss A. A 4
Gaetz, H. B. PhmL 1
Gaetz, H. R. PhmD 4
Gaetz, J. R. Ag 2
Gaetz, T. H. M 2
Gaines, Miss M. E. Corr
Gallay, Miss M. A M 4
Garbutt, Miss A. E. PhmD 2
Gardiner, Miss B. D. A 4
Gardiner, E. W. A 3
Garrioch, H. G. M 3
Garrison, Miss D. A 3

Geary, R. H. PhmL 1-yr
Geddes, Miss H. A 2
Geeson, J. R. Grad
Gemmell, Miss H. c A 1
George, A. H. c Dent 1
Gerber, C. C. A L 4
Gerrie, Miss C. A 2
Gibson, A. L 3
Gidman, W. O. p S 2
Giffen, A. D. Arch 3
Giffen, Miss B. A 4
Gillespie, Miss A. M. c A 1
Gillespie, Miss C. Corr
Gillespie, W. F. Grad.
Gillis, Miss N. M 3
Gimpel, S. M 2
Girling, Miss G. P H N
Glenn, J. S. M 2
Glover, J. B. A 4
Glover, R. M. A 2
Gold, Miss M. H. Grad
Goldstein, G. R. M 2
Goldstein, N. B. L 2
Golics, Miss K. E. Corr
Good, L. p S 3
Goode, F. E. c A S 1
Goodman, E. L 1
Goodwin, Miss L. A. A 2
Gordon, C. L. A 3
Gorelick, E. M 2
Goss, Miss A. M. c A 1
Gould, Miss M. G. P H N
Gowan, E. H. A S 2
Graburn, W. L 1
Graham, Miss E. J. c M 1
Grant, J. W. c Dent 1
Gray, F. W. A 4
Gray, H. E. A Ag 2
Gray, J. F. PhmL 2
Green, Miss A. P H N
Greene, Miss E. A 1
Greer, Miss E. S. c PhmD 1
Grimmett, Miss K. E. M 2
Grimson, J. C. M 2
Grindley, F. L. A 1
Grindley, T. W. A Ag 2
Gross, P. L. c A 2
Gudgeon, F. H. A L 2
Gudmundson, A. E. Corr
Guenther, H. G. Ag 1
Habgood, F. T. sp A 2
Hagerman, T. H. sp A 3
Haig, A. A. M 1
Haig, W. R. M 1
Haight, J. L. SS 1 & Corr
Halabisky, N. D. M 1
Hall, E. R. M 2
Hall, Miss M. E. SS 1 & Corr
Hall, Miss M. I. A 4
Hall, N. D. M 2
Halpin, H. E. c M 1
Hamilton, Miss J. M. A M 4
Hamilton, S. P. A 4
Hamilton, T. F. S 2
Hamilton, W. S. Dent 2
Hamman, H. A. M 3
Hanna, W. F. Ag 2
Harcourt, Miss D. K. c HEc 1
Hardin, H. F. c A M 1
Hardin, N. M. PhmD 2
Hardy, A. V. Corr
Harkness, D. S. c A L 2
Harmer, R. M. p Dent 1

UNIVERSITY OF ALBERTA

Harper, H. O.	c M 1
Harrington, T. J.	Corr
Harrison, J. E.	M 3
Harrison, R. H. C.	c A L 1
Harrison, R. W.	A 1
Hart, T.	A 1
Harvey, Mrs. H.	p A 3
Havelock, A.	c Dent 1
Haw, J. L.	S 2
Haw, Miss O. V.	A 1
Hawkins, Miss Viola S.	Corr
Hay, Miss E. L.	Corr
Hayes, Sr. J.	SS 1 & p A 2
Hayhurst, W.	PhmD 2
Hegler, Miss B. E.	HEc 1
Hegler, Miss F. H.	A 2
Heller, A.	Ag sp
Henderson, Miss M. W.	Corr
Hennessey, Miss J. P.	c PhmD 1
Henry, H.	c L 2
Henry, W. A.	A M 4
Herbert, W. B.	A L 2
Herbreteau, Sr. J.	SS 1 & p A 2
Hewko, P. A.	c PhmD 1
Heywood, A. J.	Grad
Hibbard, Miss A.	A 4
Hibbard, R. J. B.	A M 4
Hickey, Sr. E.	SS 1
Hicks, R. A.	M 2
High, R. C.	Arch 1
Hill, W. H.	PhmL 2
Hillerud, S. O.	Ag sp
Hipkin, G. A.	Grad
Hnatyshyn, A. C.	S 3
Hnatyshyn, N. M.	c M 1
Hodson, T. C.	c L 1
Holden, Miss E.	Corr
Hollies, E. G.	A M 4
Hollies, R. T.	Grad S
Hollies, W. St. G.	A 3
Hollinshead, J. L.	A 2
Holmes, Miss G. V.	PhmD 4
Hoover, J. N.	M 3
Hope, Miss J. T.	A 2
Horne, H. W.	c A M 1
Huckell, R. G.	M 2
Hughes, J. F. L.	Ag sp
Hummon, V.	Ag 2
Hunt, C. W.	sp A 1
Hunter, J. A. P.	Ag 3
Hurst, D. D.	M 2
Husband, Miss L. E.	A 4
Huskins, C. L.	Ag 1
Hustler, G. F.	A 4
Hyde, E. E.	Grad
Hyde, J. S.	sp A 3
Iddings, Miss T. A.	A 2
Irwin, P. St. C.	M 3
Jackson, Miss G.	A 4
Jacques, E. E.	PhmL 1-yr
Jaffary, S. K.	S 4
James, Miss N.	A 4
Jamieson, F. G.	c M 1
Jamieson, K. R.	A 1
Jampolsky, M.	M 3 & Grad
Jarrett, W. A.	A M 2
Jean-Richard, M. E.	A 2
Jewell, Miss G.	c A 1
Jewitt, W. G.	S 2
Johnson, Miss A.	Corr
Johnston, H. C.	L 3
Johnston, R. E.	M 2
Jonason, C. J.	c A 2

Jones, E. L.	S 2
Jones, Miss E.	P H N
Jones, I. W.	A S 3
Jones, J. I.	L 3
Jones, J. T.	p A 3
Jones, Miss M. E.	PhmL 1
Jones, R. E.	c A 2
Joyce, Miss A. F.	HEc 1
Kain, Miss K. M.	Corr
Kain, Miss M. M.	Corr
Kane, E. W. S.	L 2
Karpoff, T. M.	c A 1
Karran, F. R. D.	c A L 1
Kask, Miss M. K.	A 3
Keith, Miss H. D.	A 3
Kelly, L. C.	c A 1
Kelly, W. A.	A 4
Kemp, A. T.	Ag 2
Kennedy, Miss A.	A 2
Kerr, Miss H. N.	A 3
Kilduff, Miss D. A.	Corr
King, W.	c A 2
Kirk, J. E.	A 4
Kirk, Miss V. J.	c A 1
Kirkpatrick, R. A.	c S 2
Kirkpatrick, W. A.	M 2
Kline, M.	p Dent 1
Knight, Miss M.	Corr
Knox, Miss M. C.	SS 1
Koenig, Miss D. L.	A 3
Koscielniak, K.	c A 1
Kostash, H. A.	A 4
Kotzin, B.	sp A 1
Krause, M. E.	M 1
Kravis, Miss L. L.	A 3
Kronick, I. R.	L 3
Kruger, W. C.	M 3
Kubaneck, J. L.	c M 1
Kutz, W. M.	M 1
La Fleche, E. C.	c A 1
La Fleche, Miss H. M.	A L 3
Laidlaw, J. B.	A M 2
Lalor, W. J. A.	Ag sp
Lamb, R. L.	A L 2
Lang, J. W.	M 3
Lang, F. J.	PhmL 1-yr
Lang, Miss L. I.	Corr
Lang, W. A.	A 2
Langford, G. V.	S 2
Langston, R. G.	c M 1
Lavell, Miss M. F.	P H N
Law, F.	M 2
Lawlor, T. W.	L 3
Lawrence, Miss B.	A 4
Lawton, W. R.	c S 2
Layng, J. D.	c Dent 1
LeBlanc, R.	SS 1
Lebourveau, H. B.	S 2
Lee, J. G.	A M 1
Lee, Miss V. V.	Grad
Lehmann, A. J. V.	A 1
Lehmann, J. F.	Grad
Lendrum, Miss M. W.	P H N
Lendrum, Miss M. A.	P H N
Leonard, M.	c A 1
Le Page, G. F.	A L 3
Letourneau, J. W.	S 1
Levey, M. R.	M 1
Lewis, J. W.	S 4
Lewis, G. M.	M 2
Liesemer, E. J.	M 2
Linton, W. I.	PhmL 1-yr

STUDENTS

Lloyd, D. D. Dent 1
 Lloyd, M. S. M 2
 Loptson, Miss A. P H N
 Luckovich, M. L 2
 Lukaschuk, H. R. A M 2
 Lynch, J. C. M 2
 Lynn, F. W. Corr
 Lyttle, R. H. sp A 3
 McAllister, C. B. Ag 3
 McAllister, J. A. S 2
 McAllister, J. W. Ag 1
 McAllister, T. H. p A 3
 McArthur, H. Ag 3
 MacArthur, K. D. A 1
 McBeath, Miss P. L. HEc 1
 McBride, J. B. L 3
 McBride, A. R. A L 3
 McCabe, J. O. A L 3
 McCarthy, Miss H. F. c A 1
 Maccaulay, A. F. A M 3
 Mc Cauley, W. E. C. A 2
 McClelland, S. H. PhmL 1-yr.
 McClung, J. A 2
 McColl, M. B. Ag 2
 McConnell, Miss A. V. Corr
 McCorry, J. c A L 1
 McCrae, P. C. sp A 1
 Mac Donald, A. H. c A L 1
 Macdonald, B. S. A 1
 Mac donald, D. H. Ag sp
 Macdonald, D. W. A 1
 MacDonald, F. J. Ag 1
 Macdonald, H. J. A L 4
 McDonald, J. A. c S 1
 Macdonald, J. D. A. A 1
 Macdonald, J. A. sp A 2
 MacDonald, J. K. c M 1
 Macdonald, J. N. SS 1
 MacDonald, S. B. PhmL 2
 Macdonald, W. Dent 1
 Mc Donald, Wm. S 3
 Macdonald, Wm. D. Ag 2
 MacDougall, W. R. A 4
 MacEachern, Miss M. M. SS 1 & A 2
 McFarlane, G. G. c A 1
 MsFarquhar, Miss J. HEc 1
 McGachie, P. G. p A M 2
 McGee, J. A. L 2
 MacGillivray, A. D. S 4
 McGookin, J. Y. A 4
 MacGregor, A. D. c Dent 1
 MacGregor, J. A. c A 1
 McGregor, Miss L. D. M 2
 Mc Gugan, A. C. c M 1
 McGuire, J. A 3
 McIntosh, Miss J. T. A 4
 McIntyre, Miss B. M. A 2
 McIntyre, Miss E. H. p HEc 1
 McKay, E. R. W. PhmL 1
 Mac Kay, F. H. c Dent 1
 McKay, J. A. A 2
 McKay, Walter A L 3
 Mackay, W. A. M 3
 McKelvey, J. sp A 2
 McKenzie, C. H. M 1
 McKibbin, R. c Dent 1
 McKinnon, D. Ag 1
 Mc Kitrick, Miss E. A. A 3
 McLagan, J. A. T. sp A 3
 MacLaren, R. F. L 3
 MacLaren, V. I. c A 1
 McLaughlin, Miss C. E. A 3
 McLaughlin, Miss I. E. HEc 2

McLaurin, C. C. L 3
 McLean, A. D. c S 1
 McLean, J. H. c S 1
 McLean, Miss L. I. A 2
 MacLean, Miss S. M. Corr
 MacLennan, Miss R. A 2
 McLennan, Miss S. I. p A 4
 Macleod, Miss A. J. c A 1
 McLeod, D. S 2
 MacLeod, D. Corr
 MacLeod, M. A 4
 McLeod, S. H. M 3
 MacLeod, S. K. Corr
 McLuhan, R. G. M 2
 McMillan, J. S 1
 McMillan, Miss J. E. A 3
 McMillan, Miss M. A. A 1
 MacMillan, W. A. c A L 2
 McNaugh, Miss E. R. SS 1
 McNeil, D. I. A L 1
 McNeil, Miss J. SS 1
 MacOwan, Miss M. J. A 1
 McQueen, Miss C. C. A 3
 McQueen, Miss J. A 3
 McQueen, R. Grad
 McRae, A. L. M 2
 Machon, G. E. L 1
 Madill, C. W. c A Ag 1
 Magrath, A. L. c A 1
 Mahaffey, Miss M. B. A 1
 Mair, B. J. A 3
 Malcolmson, Miss A. N. A 4
 Mallett, M. M 2
 Malone, Miss M. M. HEc 1
 Manning, A. H. A 2
 Manning, F. C. A 2
 Manson, A. B. M 1
 Manzer, L. H. A 4
 Marleau, W. F. c S 2
 Marryat, Miss S. Ag 1
 Marshall, J. C. c A Ag 2
 Marshall, S. A 2
 Marshall, T. G. sp A 2
 Martin, Miss E. M. F. A 2
 Martin, Miss C. A. Corr
 Martin, H. A. PhmL 1
 Mascuich, W. c M 1
 Mason, Miss M. L. c HEc 1
 Masson, H. V. K. Corr
 Mather, T. H. Ag 2
 Mathie, J. A 1
 Matthews, A. W. PhmD 4
 Matthews, Miss C. W. Corr
 Matthews, Miss E. C. c A 1
 Matthias, Miss M. H. c A 1
 Matz, Miss M. Corr
 Maxwell, Miss N. C. sp A 1
 May, E. V. A 1
 Mayhew, Miss M. L. c HEc 1
 Meagher, J. E. Ag 3
 Mealing, C. H. A 1
 Melling, P. M 3
 Melnychuk, M. A. c M 1
 Meneely, A. H. M 3
 Menzies, E. C. M 2
 Messenger, T. T. c A 1
 Michael, R. K. c S 1
 Michie, T. C. c M 1
 Middleton, W. M 2
 Might, A. E. A 3
 Millen, J. S 1
 Millar, A. E. Ag sp
 Miller, Miss A. R. A 3

UNIVERSITY OF ALBERTA

Miller, J.	A M 1
Millican, J. A. H.	c Dent 1
Milward, E. H.	sp A 1
Misener, G. D.	Grad
Miskew, P. A.	A 3
Mitchell, Miss B.	c A 1
Mitchell, C. A.	Corr
Mitchell, E. L.	c PhmL 1
Moody, H. S.	S 1
Moore, G. G. L.	A L 4
Moore, Miss H. H. M.	A 3
Moore, L. D.	p M 1
Moore, R. C.	c M 1
Moore, Miss R. M.	SS 1
Moraw, L. S.	A L 4
Morden, Miss V. I.	p A 1
Morgan, A. R.	A 3
Morgan, S. C.	Grad
Morkin, Miss M. E.	P H N
Morris, W. D.	M 2
Morrison, W.	sp A 2
Morrow, Miss M. L.	c A 2
Morrow, R. J.	M 2
Morvan, Miss M. C.	Corr
Moss, R. W.	A 2
Muir, C. K.	A S 2
Munro, A. M.	Grad
Munroe, W. D.	c A M 1
Murphy, F. J.	M 2
Murphy, T.	Grad
Murray, Sr., J.	SS 1 & A 3
Myles, E. R.	M 2
Nash, D. D.	SS 1
Necker, A. C.	c Dent 1
Newby, Miss A. A.	A 1
Newland, H. C.	Grad
Newton, Miss D. A.	A M 1
Newton, F. J.	A L 1
Newton, M. G.	sp A 2
Nicoll, J. McL.	A S 4
Nicoll, Miss J. K.	A 4
Nielson, S.	A 3
Nix, H. L.	Ag 1
Noble, Miss M. L.	SS 1
Norrington, Miss A.	Grad
O'Brien, J. W.	Corr
O'Connor, Miss S. J.	L 4
O'Donnell, C.	c A L 1
O'Grady, G. L.	SS 1
Ogston, A. W.	A 3
Oliver, W. L.	sp Ag 2
Ormsby, A. E.	c A 1
Orr, A. G.	c M 1
Orr, Miss O. A. I.	Corr
Osborne, W. C.	c M 1
Owen, P.	c A S 1
Owre, V. A.	c A 1
Page, R. H. C.	c A 1
Palmer, M. B.	A 2
Parke, Miss A. V.	c A 1
Parke, S.	c S 1
Parkinson, H. G.	c A M 1
Parlby, Mrs. I.	sp A 3
Parney, G. L.	A L 4
Paterson, A. B.	c A 1
Paterson, F. K. W.	c A 1
Paterson, G. C.	L 1
Patrick, L.	L 1
Patterson, E. G.	S 2
Patterson, C. R.	A 2
Pattullo, Miss C. B.	SS 1 & Corr
Pawling, H. M.	PhmD 2
Pawluk, P.	p M 1

Peacock, B. E.	Ag 1
Pearson, R.	L 1
Peddicoord, E. L.	S 1
Pegrum, D. F.	A 3
Pegrum, R. H.	A 2
Peirce, J. R.	Ag 1
Pelech, S. T.	c M 1
Pennock, F. B.	A L 6
Pentland, Miss L. G.	A 4
Peterson, A. E.	Corr
Peterson, R. A.	A Ag 1
Petrie, D. A.	SS 1
Phelps, P. P.	c M 1
Phillips, E. W.	Ag 2
Phillips, E. W.	Ag 2
Phillips, G. E.	c Dent 1
Philp, C. W.	c A 1
Philp, D. F.	A 3
Pierson, Miss E. I.	c HEc 1
Pinder, C.	sp A 3
Pinkney, Miss B.	Corr
Pinsky, S. I.	PhmL 1
Plummer, N. M.	L 3
Poole, Miss M. M.	A 4
Power, Miss S. K.	sp A 1
Powlett, C. H. A.	L 2
Puffer, S. A.	L 3
Putland, A. K.	c A 3
Race, C. E.	Grad
Rankin, G. C.	M 2
Ranson, A. S.	PhmL 1-yr
Raver, Miss H. J.	A 4
Raver, Miss I. C.	HEc 1
Rawlinson, F.	A L 1
Ray, Miss V.	P H N
Reed, G. E.	c M 1
Reed, T. W.	sp A 1
Reid, C. D.	p S 3
Rein, Miss R.	L 3
Revell, A. M.	c A 1
Revell, J. E.	sp A 1
Richards, Miss D. F.	A 2
Richards, R.	S 3
Richards, W. C.	p A M 2
Richardson, F. J.	L 4
Riches, P. L. F.	A L 4
Richmond, Miss E. M.	c A 1
Rideout, Miss F. M.	Dent 1
Roberts, Miss J.	SS 1 & Corr
Robertson, Miss H. M.	c A 1
Robertson, Scott	A 1
Robinson, Miss B. M.	Corr
Robinson, C. R.	L 4
Robinson, Miss E. R.	Corr
Robinson, Miss V. B.	A 2
Robison, S. C.	Ag 2
Rogers, Miss M. F.	c A L 1
Rogers, Miss M. E.	c A M 1
Rogers, W. W.	Corr
Romer, J.	c Dent 1
Ronning, T.	c M 1
Roscoe, Miss H. M.	SS 1 & A 3
Roseborough, A. S.	M 2
Ross, Miss F. E.	L 1
Ross, S. E.	c A 1
Roth, Miss E.	HEc 2
Roth, Miss L.	sp A 3
Rothwell, J. M.	c A S 1
Routledge, G. L.	M 2
Rowe, Miss M. E.	M 1
Rowse, S. A.	PhmL 2
Rudd, F. A.	c A L 2
Ruddy, C. E.	c A L 1

STUDENTS

Ruddy, J. O. c M 1
 Rudin, L. M 3
 Rupp, Miss L. E. PhmL 1
 Russell, J. G. L 3
 Rush, R. D. c A M 1
 Russell, Miss M. B. PhmD 2
 Russell, Miss Gwen SS 1
 Rutherford, Miss I. Corr
 Rye, J. C. c A 1
 Salisbury, L. J. L 1
 Sampson, C. V. PhmL 2
 Sampson, J. A. Dent 2
 Sanders, L. O. PhmL 1
 Sanderson, J. O. G. A 2
 Sandstrom, Miss A. M. Corr
 Sanford, G. B. Grad
 Saul, Mrs. A. M. Corr
 Saunders, W. G. c M 1
 Sawula, S. L 3
 Sayers, J. H. L 4
 Schulstad, Miss H. M. c A 1
 Scott, Miss A. E. SS 1
 Scott, Miss L. M. c PhmD 2
 Scott, N. c PhmD 2
 Scott, P. C. L 4
 Scott, W. T. c A M 2
 Scroggie, A. G. A 3
 Secord, Miss I. A L 2
 Selnes, W. E. c A 1
 Selnes, Miss B. M. Corr
 Sereth, G. A L 3
 Shnakman, H. A 2
 Shanks, Miss M. S. A 2
 Shavchook, P. c A L 1
 Shaw, Miss O. J. A 2
 Sheremeta, J. C. A L 1
 Sheridan, R. H. A L 3
 Shippam, F. c M 1
 Shlain, B. Dent 2
 Short, W. A. A 1
 Shott, B. H. Ag 1
 Sillak, J. G. A L 4
 Simenstein, Miss G. A M 3
 Simmons, Miss M. J. A 2
 Simmons, R. L. c M 1
 Simpkin, Miss M. A 2
 Simpson, A. M. c A M 3
 Simpson, Alfred L 3
 Simpson, D. S. S 1
 Simpson, Miss G. S. HEc 1
 Simpson, Miss M. S. A 3
 Simpson, R. H. c Dent 1
 Sinclair, A. S. M 2
 Sinclair, D. C. L 3
 Skiles, D. C. A L 1
 Skorey, M. c Dent 1
 Skorey, J. M. c Dent 1
 Skorey, Miss H. Corr
 Smith, Miss E. Corr
 Smith, A. L. sp A 1
 Smith, F. G. M. c A 1
 Smith, K. A 4
 Smith, Miss L. A. A 3
 Smith, S. B. L 4
 Smithers, G. T. S 4
 Smyth, R. C. A 1
 Soby, H. W. M 1
 Souter, L. C. R. L 2
 Sparks, L. J. c A 1
 Sprung, Miss S. F. A 4
 Stacey, E. C. c A Ag 1
 Stacey, Miss F. Corr & HEc 2
 Stafford, Miss D. D. A 3

Stanton, H. E. L 4
 Stark, J. H. sp A 1
 Stauffer, M. L. M 1
 Steele, Miss E. M. A 4
 Steele, Miss I. M. A 3
 Steele, Mrs. N. V. Corr
 Steeves, Miss H. D. L 1
 Stephenson, Miss M. V. A 2
 Sterritt, W. R. S 2
 Stewart, Miss C. S. c A 1
 Stewart, Miss J. I. c A 2
 Stewart, Miss J. M. HEc
 Stewart, Miss M. B. p M 1
 Stewart, N. M. A 2
 Stewart, W. R. PhmL 1-yr
 Stock, H. P. PhmL 1-yr
 Stock, S. W. S 1
 Stooke, Miss M. M. p PhmL 2
 Stolee, P. B. c A 2
 Stover, N. M. Grad
 Strilczyk, N. M 1
 Stuart, O. L. A L 3
 Stubbs, Miss F. L. Grad
 Stutchbury, E. W. A L 3
 Suitor, Miss M. A 3
 Sulis, E. N. M 3
 Summerhayes, Miss M. B. Grad
 Sutcliffe, F. A. c A 1
 Swan, J. F. c A M 1
 Swanson, Miss A. c A 3
 Swift, W. H. c A 1
 Switzer, Miss E. M. Corr
 Symes, W. E. S 1
 Syska, S. J. c M 1
 Tait, R. M. M 2
 Tames, J. A. p A 1
 Taylor, Miss F. G. HEc 2
 Taylor, G. B. A 2
 Taylor, H. E. c A 1
 Taylor, R. C. A 4
 Taylor, R. F. sp A 1
 Telfer, L. S 1
 Tempest, Miss D. PhmD 2
 Terril, Miss K. A 4
 Teskey, H. G. A 2
 Teviotdale, D. J. i. Grad
 Third, J. A. PhmL 1
 Thom, J. MacG. c A L 1
 Thompson, W. A 4
 Thomson, Miss G. H. Grad
 Thomson, W. S. c A 1
 Thornton, H. R. Ag 2
 Thurston, G. W. M 3
 Timmins, Miss B. HEc 2
 Tomlinson, H. O. A 2
 Torrance, C. G. PhmL 1
 Torrie, D. McL. PhmL 1-yr
 Treacy, Miss S. McM. A 2
 Tregillus, Miss M. C. Grad
 Trimble, B. c M 1
 Trimble, Miss G. M. HEc 3
 Trimble, Max c M 1
 Trowbridge, Miss C. E. c A M 1
 Tuck, M. A 1
 Tucker, E. Corr
 Tucker, E. W. M 2
 Turnbull, W. B. A L 1
 Turner, C. E. c A 1
 Turner, W. O. A L 1
 Twist, J. Ag sp
 Underwood, C. A S 2
 Upton, R. sp A 2
 Valens, W. L. c A 1

UNIVERSITY OF ALBERTA

Van Buren, Miss H. M. L. L 2
 Van Buskirk, Miss B. E. c A 1
 Van Idour, Miss L. E. L 1
 Varnum, A. C. A 3
 Verchomin, J. c M 1
 Verreau, E. M 2
 Vickerson, F. O. PhmL 1
 Villett, G. H. A 3
 Villy, Miss M. H. A 3
 Wade, J. L. Corr
 Waines, F. D. S 1
 Wait, F. E. M 3
 Wait, N. A. S 1
 Walker, A. J. M 2
 Walker, C. R. Ag 2
 Wallace, P. A. W. Grad
 Wallbridge, E. G. L 2
 Wallis, Miss E. I. A 2
 Walsh, T. J. c A M 1
 Ward, A. E. c M 1
 Ward, A. S. Ag 1
 Ward, J. C. Dent 2
 Watchorn, H. J. L 1
 Watson, A. M. PhmL 1
 Watt, Miss M. E. F. sp A 3
 Watt, Miss P. E. Corr
 Watt, R. G. Corr
 Watts, C. W. PhmL 1
 Weaver, C. Y. L 4
 Webb, H. R. S 4
 Webster, D. A. C. A 3
 Wees, W. R. A 2
 Welch, Miss S. A. M. A 4
 Wershof, Miss M. J. A 3
 Weselake, E. c Dent 1
 Weselake, L. J. c Dent 2
 West, Miss F. C. sp A 3 & P H N
 Weston, C. A. PhmL 2
 Weston, D. T. M 2
 Weston, Miss S. c A 2
 Westwood, A. N. c M 1

Whiffin, H. E. L 4
 Whittaker, E. L. A 4
 White, E. W. c A L 1
 White, R. D. L 1
 Whiteman, Miss D. A 4
 Whitford, O. W. c A 2
 Whitman, F. P. S 2
 Whittaker, Miss M. D. SS 1
 Wilkin, Miss M. A. P H N
 Wilkinson, E. c Dent 1
 Wilkinson, J. S. Dent 1
 Williams, Miss C. L. A 3
 Williams, Miss E. M. Corr
 Williams, J. F. Ag 1
 Williams, Miss R. A. A 4
 Williamson, J. A. c A L 1
 Willis, E. F. Grad
 Willis, E. M. A L 2
 Willson, G. V. Ag sp
 Wilson, A. R. Dent 1
 Wilson, Miss A. sp A 1
 Wilson, G. L. A 3
 Wilson, Miss H. M. HEC 2
 Wilson, H. O. M 2
 Wilson, Miss I. S. A 3
 Wilson, W. F. Ag 3
 Wilton-Clark, H. c S 1
 Winfield, Miss E. Corr
 Winspear, A. D. A 2
 Wood, Miss A. A. A 3
 Wood, Miss R. Y. A S 2
 Wrinch, C. H. PhmD 1
 Wrinch, L. B. A M 3
 Yakimischak, J. M 3
 Yarwood, R. E. c A 1
 York, D. A. S 2
 Young, C. A 4
 Young, F. G. Grad
 Young, Miss H. B. sp A Ag 1
 Young, Miss N. C. R. PhmL 1
 Yuill, J. H. S 2
 Zaharychuk, A. p M 1

Scholarships and Prizes Awarded

1920-21

SCHOLARSHIPS

THE WOMEN'S UNIVERSITY CLUB SCHOLARSHIP

For women in the first year of the Faculty of Arts and Sciences.
Hazel May Robertson.

SCHOLARSHIPS IN THE FACULTY OF MEDICINE OFFERED BY THE COLLEGE OF PHYSICIANS AND SURGEONS OF THE PROVINCE OF ALBERTA

First year—General Proficiency: William Henderson Cassels.
Third year—Physiology: Andrew H. Meneely.
Third year—Anatomy: James Nelles Hoover.

PRIZES

THE JANE ALEXANDER MEMORIAL PRIZES

In Latin: Kenneth Richard Jamieson.

In Geology: Nelles Henry Atkinson.

THE GORDON STANLEY FIFE MEMORIAL PRIZE

In History: Bertha Lawrence.

THE SAMUEL RICHARD HOSFORD MEMORIAL PRIZE

In English: Margaret Harman Villy.

THE HAROLD WALDO HUESTIS MEMORIAL PRIZE

In English: Dorothy Freda Richards.

PRIZES IN MATHEMATICS

In Mathematics 1: William Herbert Swift.

In Mathematics 3: Kenneth Richard Jamieson.

THE VALLEE FRENCH PRIZE

Kenneth Richard Jamieson.

THE FRENCH PRIZE OF THE SOCIETE DU PARLER FRANCAIS

Marcel Edmond Jean-Richard.

UNIVERSITY OF ALBERTA

THE FRENCH PRIZE OF THE COMITE PERMANENT DE LA LANGUE FRANCAISE

Ada Augusta Anderson.

THE HISTORICAL CLUB PRIZE

Dorothy Freda Richards.

MEDALS

THE GOVERNOR-GENERAL'S MEDAL

Faculty of Agriculture: Sidney Barnes.

THE LIEUTENANT-GOVERNOR'S GOLD MEDAL FOR THE STUDY OF SHAKESPEARE

(Not Awarded.)

THE CHARLES ALLAN STUART GOLD MEDAL IN CLASSICS

(Not Awarded.)

THE ALEXANDER CAMERON RUTHERFORD GOLD MEDAL IN ENGLISH

(Not Awarded.)

THE WOMEN'S UNIVERSITY CLUB GOLD MEDAL

For Proficiency in the Faculty of Art and Sciences

Kenneth Smith.

THE JOHN A. McDUGALL GOLD MEDAL

For Proficiency in the Faculty of Applied Science

Harry Randall Webb.

THE CHIEF JUSTICE'S GOLD MEDAL IN LAW

(Not Awarded.)

THE JAMES RAMSEY GOLD MEDAL IN MATHEMATICS

(Not Awarded.)

FELLOWSHIP

THE LLOYD HARTNOLL BISHOP MEMORIAL FELLOWSHIP IN ENGLISH LITERATURE

(Not Awarded.)

CONFERRING OF DEGREES

PRESENTATION OF DIPLOMAS AND CERTIFICATES

DIPLOMAS IN PHARMACY

Bertles, Hugh
Hill, Walter Herbert
Macdonald, Stuart Bruce

Rowsell, Sidney Albert
Sampson, Clarence Vernon
Weston, Charles Augustus

CERTIFICATES IN SPECIAL COURSE IN PHARMACY

Cory, Wilbur Albert
Gray, John Finley
Jacques, Ernest Edmund
Lang, Frederick John

Linton, Warwick Irving
McClelland, Samuel Herbert
Ransom, Albert Sidney
Torrie, Duncan McIntyre

CERTIFICATES IN PUBLIC HEALTH NURSING

Belcher, Margaret Anna, R.N.
Conroy, Amy Louisa, R.N.
DeTurbeville, Genevieve, R.N.
Emerson, Blanche Annie, R.N.
Girling, Gertrude, R.N.
Gould, Miriam Georgina, R.N.
Green, Annie, R.N.

Jones, Ethel, R.N.
Lavell, Marion Farrell, R.N.
Loptson, Anna, R.N.
Morkin, Martha Elizabeth, R.N.
Ray, Victoria, R.N.
West, Florence Caroline, R.N.
Wilkin, Minnie Adelaide, R.N.

CONFERRING OF DEGREES

ADMITTED TO THE DEGREE OF BACHELOR OF ARTS

Anderson, Ada Augusta
Bissell, Ina Brooks
Blow, Wilda Edith
Chrystal, Catherine
Dake, Beatrice Irene
Dobry, Christine Antoinette
Fuog, Agnes Hedwig
Gallay, Minnie
Gardiner, Bessie Dow
Hall, Mildred Itasca
Hamilton, Jessie Morrow
Hibbard, Avis
Husband, Lillian Eleanor
Jackson, Genevieve
James, Nellie Isabel
Lawrence, Bertha (with First
Rank Honours in History).
McIntosh, Jeanette Thomson
McLaughlin, Constance Elaine
Malcolmson, Audrey Nan
Poole, Mabel Mary

Raver, Helen Jeanette
Sprung, Sibyl Florence
Steele, Ethel Mildred
Terrill, Kathleen Sutherland
Welch, Sybil Anna May
Williams, Ruth Alberta
Bainbridge, Joseph William
Bainbridge, Sidney
Banks, Charles Whitney
Berman, David
Blain, Lysle Kellogg
Budd, William Sinclair
Davidson, James Robertson
Gerber, Claus Conrad
Glover, James Barraclough
Gray, Francis Willard
Hamilton, Stuart Perry
Henry, William Addison
Hibbard, Rodger James Blanchard
Hollies, Edward Gardiner
Kelly, William Aultin

UNIVERSITY OF ALBERTA

Kirk, Joseph Elmer	Robinson, Coleman Rogers
Kostash, Harry Alexander	Sillak, John George (with Sec-
Macdonald, Hugh John	ond Rank Honours in Ger-
MacDougall, William Russell	man)
McGookin, John Young	Smith, Kenneth (with First
MacLeod, Munro (with First	Class Standing in the Gen-
Rank Honours in History)	eral Course)
Moore, George Gerald Logan	Taylor, Roy Charles
Moraw, Lorne Stanley	Thompson, William
Parney, George Lyman	Whittaker, Edgar Lacy
Riches, Percival Lindsay Forbes	Young, Charles

ADMITTED TO THE DEGREE OF BACHELOR OF ARTS, AD EUNDEM

Crilly, Alice M., B.A.
Manning, Gerald Frederick Langley, Ph.B.

ADMITTED TO THE DEGREE OF BACHELOR OF SCIENCE IN ARTS

Cooke, Anna Evelyn Einarson, Gisli

ADMITTED TO THE DEGREE OF BACHELOR OF SCIENCE IN ARTS, AD EUNDEM

Norrington, Annie, B.Sc.

ADMITTED TO THE DEGREE OF BACHELOR OF SCIENCE IN HOUSEHOLD ECONOMICS

Fraser, Lila Marion Trimble, Gladys Myrtle

ADMITTED TO THE DEGREE OF BACHELOR OF SCIENCE IN PHARMACY

Gaetz, Howard Ruskin Matthews, Arnold Whitney
Holmes, Gladys Viola

ADMITTED TO THE DEGREE OF BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Jaffary, Stuart King Webb, Harry Randall

ADMITTED TO THE DEGREE OF BACHELOR OF SCIENCE IN MINING ENGINEERING

Lewis, John Wesley Smithers, Gordon Theodore
MacGillivray, Archibald Dean

CONFERRING OF DEGREES

ADMITTED TO THE DEGREE OF BACHELOR OF SCIENCE IN APPLIED SCIENCE, AD EUNDEM

Hill, Esther Marjorie, B.Sc.

ADMITTED TO THE DEGREE OF BACHELOR OF LAWS

Boyd, John
Buchanan, Nelles Victor, B.A.
Burley, Arnold Edward
Dafoe, Leo Griffin
Dunne, Patrick Michael
Garside, Thomas Emsley
McBride, James Boyd

Newland, Hubert Charles, B.A.
O'Connor, Thomas Joseph
Paterson, Alexander Blair
Pennock, Frederick Brock, B.A.
Richardson, Frederick Joseph
Sayers, John Henry
Stanton, Hugh Ellsworth, B.A.

ADMITTED TO THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE

Barnes, Sidney
Buckingham, Ernest Howard
Clark, John George
Doughty, Jesse Lowell
Hunter, James Arthur Phin

McAllister, Charles Barnet
McArthur, Hector
Meagher, James Edward
Ward, Albert Stephen
Wilson, William Finlay

ADMITTED TO THE DEGREE OF BACHELOR OF DIVINITY

Morecombe, Percy Frederick Guido, B.A.

ADMITTED TO THE DEGREE OF MASTER OF ARTS

Gillespie, William Fulton, B.A., M.B.
Munro, Alexander Mortimer, B.A.
Teviotdale, David Jefferson, B.A.

ADMITTED TO THE DEGREE OF MASTER OF SCIENCE IN ARTS

Lee, Vera Verna, B.Sc.

Stover, Norman McKee, B.Sc.

ADMITTED TO THE DEGREE OF MASTER OF SCIENCE IN APPLIED SCIENCE

Hollies, Robert Talbot, B.Sc.

ADMITTED TO THE DEGREE OF DOCTOR OF MEDICINE, AD EUNDEM

Astrof, Samuel, M.D.

HONORARY DEGREE OF DOCTOR OF LAWS

Sir James Albert Manning Aikins.

UNIVERSITY OF ALBERTA

Since Convocation, 1920, the following persons have passed the examinations for License to Practise, conducted by the University on behalf of the Affiliated Professional Societies

In May, 1920.

ACCOUNTANCY

Downs, W. N.
Forson, H. G.

Symes, H. R.
Thompson, J. C.

PHARMACY

Atkin, Dr. G. M.

Sommerville, J. N.

MEDICINE

Alton, J. A.
Borden, R. P.
Byers, G. A.
Empay, H. S.
Hanna, W. J.

Logie, H. B.
Mewburn, I. H. H.
Ower, J. J.
Snyder, J. B.
Tiffin, M. E.

OSTEOPATHY

Siemens, W. J.

LAW

Adams, A. C. L.
Atkin, G. M.
Blue, J.
Barclay, Helena K.
Burley, A. E.
Carswell, C. F.
Cutler, L. S.
Darling, E. C.
Delf, J. H.
Fradkin, L. M.
Genge, St. J. C.
Harvie, J. G.

McKay, R. S.
MacWilliams, A. C.
Manzer, R.
Mothersill, J. D. O.
Noble, G. D.
Paterson, A. B.
Playter, Greta A.
Richardson, F. J.
Sissons, J. H.
Scott, P. C.
Valens, H. H.
Wilson, H. J.

NURSING

Adams, D. R.
Allison, Maude V.
Beggs, Annie
Cameron, Bertha M.
Clerihue, Fanstone A.
Clutton, Evangeline
Dale, Bessie E.
Derschweiler, Mary C.
Edwards, Kathleen M.
Fleming, Mary
Fraser, Margaret S.
Gimbey, Eva J.
Gunn, Alexandra S.
Harries, Marion E.

Hay, Alice I.
Husband, Edna J.
Lawrie, Maud
Lord, Amy E.
Long, Ruth A.
McDonald, Alice F.
MacRae, Sara C.
Madden, Catherine A.
Milburn, Minnie
Moore, Mrs. M.
Moyer, Hazel
Muirhead, Christina McL.
Marsh, Ellen E.
Mansbridge, Margaret

CONFERRING OF DEGREES

Prichard, Florence
Price, Alma B.
Robertson, Ada J.
Rumohr, Verna M.
Russell, Marjorie L.

Spence, Mary
Stauffer, Cora
Watson, Nelly H.
Woolrich, Blanche
Williams, Edith

In September, 1920.

PHARMACY

Findlay, Jas.

Pickup, C. W.

MEDICINE

Foley, T. F. J.
Haysmer, C. A.

McDougall, J. A.
Myers, M.

OSTEOPATHY

Horning, J. E.

DENTISTRY

Green, Wm.

NURSING

Brunken, H.
Bowe, R.
Barker, A. E.
Bella, S. M.
Bell, H. E.
Coursey, A. E.
Day, I.
Ducy, M.
Doughty, K. M.
Giles, D. I.

Hood, E. A.
Kennedy, A.
Lynn, D.
McIlroy, M.
Muir, J. I.
Mutrie, M.
Olin, M.
Robinson, B. L.
Stevenson, E. V.
Stolz, I.

LAW

Buchanan, N. V.
Bury, Mrs. G. E.
Gordon, A. H.
Hiebert, J. C.

Miller, A. H.
Niblock, C. W.
O'Connor, Sarah J.
Riley, F. R.

In January, 1921.

LAND SURVEYING

Stuart, Alex. G.

In February, 1921.

PHARMACY

Thompson, H.

UNIVERSITY OF ALBERTA

In April, 1921.

MEDICINE

Cairns, L. L.
Deming, E. C.
McLeod, R. A.

Campbell, H.
Anderson, W. A.
Horning, J.

OSTEOPATHY

Deming, E. C.

NURSING

Christopherson, O.
Nelson, M. L.
Swanson, D. C.
Turnbull, F. G.
Wagner, V. M.
McDougall, J.
Compton, Mrs. F. J.
Asp, H.
Chisholm, E.
Fleming, A.
Grant, O.
Grettan, Mrs. E.
Pheasey, M.
Whiteside, B.

Brohman, D.
Cooney, E.
Kennedy, E.
McLeod, L.
Saxer, E.
Stewart, P.
Wolf, L.
Harvey, G.
Larson, R. M.
McMurray, M. P.
Lendrum, Mrs. W. J.
Frigon, L. M.
Hayes, M.
Smart, M. G.

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